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DO not despise small things. A few nicely arranged, seasonable specialties exposed on the show case or the counter sell themselves if marked in plain figures. Care must be taken, however, not to overdo it. It is better to have a few things of this kind prominently displayed and changed once or twice a week than to have a wilderness of them stand ing unchanged from month to month.

"WELL bought is half sold," is an old proverb whose point gains keenness in these times of stress. Do you buy well? Do you note the changes as reported in our market review from week to week? Do you consider the season, and bearing in mind your future needs, keep a close watch for a chance to buy closely? If not you do not appreciate to the full the value which this paper may be to you.

A FLUSHING druggist (by which is meant a druggist of Flushing) has put to good and novel use some of the illustrations published in our series of "Tips on Advertising." Being something of an artist he has reproduced some of the more striking of these illustrations in enlarged form and utilized them as a basis for a series of window show cards. It is with pleasure that we also note many other instances where good results have followed from the awakening of the druggist to the fact that he has not heretofore been making that intelligent use of his advertising opportunities which he might and should. It does not suffice at this day and time to merely have a good thing to sell. It is necessary to impress this fact upon the public, and our "Tips on Advertising" furnish many practical ideas on how best to do this.

PHARMACISTS AS ANALYSTS.

THE Seventh International Pharmaceutical Congress passed a resolution concerning the pharmacist as an analyst as follows:

Resolved, That in the judgment of this Congress, the educated pharmacist is the natural and proper expert on measures for public tests, not only in prevention of adulteration but in the inspection of water supplies, of sewage, etc. The pharmacist is, by virtue of his profession, the common chemist of the common people.

This resolution may claim attention as an aspiration rather than as an asseveration. It voices the sentiment rather than the situation of the pharmacist.

In the Austrian Diet last Spring the question of making the pharmacist the official analyst received very serious consideration, and though the bill making this change failed of passage, the mere fact that such a measure was seriously debated and received a very respectable support augurs well for the growth of a sentiment in this direction.

It may be of interest to note the pros and cons of the question as they were elicited in the debate in the Austrian legislature, for in some part at least the same arguments would apply to a similar proposal in any other country.

It was argued in favor of the measure that it was desirable to have official analysts so located as to be easy of access in all parts of the empire; that the amount of work to be done in the more thinly populated districts would not warrant the government in establishing a laboratory and keeping a trained expert at hand, and that, this being impracticable, the residents of such sections would be deprived of service to which they were entitled, equally with the urban population, unless some other provision were made.

Under these circumstances it was urged that recourse would naturally be had to the pharmacist who had all or nearly all the appliances and the qualifications required to fill the post of public analyst.

It was admitted that the curriculum of the pharmacist as now laid down (in Austria this is prescribed by the general government) fell short of supplying all the requirements called for if the pharmacist is also to be the analyst, but these shortcomings, it was stated, could be very readily supplied and that too without lengthening the time of attendance on the University.

Many of the pharmacists had by post-graduate

studies already qualified for the performance of the duties of the analyst or at least for such of those duties as he would be required to perform in the rural districts where alone pharmacists were to be appointed, and that by a careful selection well qualified men could be found in almost every locality where it was deemed necessary to have an analyst located.

It was also stated that the public already considered the pharmacist as in some sort a sanitary expert, frequently consulting him informally on matters of sanitation and hygiene, and that by giving the pharmacist official recognition by appointment as a government analyst he would command a place in the public esteem more in accord with that which his qualifications deserved than was now accorded him.

The arguments of the opposition consisted of a denial of the qualifications of the pharmacist, and of a statement that, even if qualified, the commercial nature of the pharmacist's calling would effectually preclude his ever acting as public analyst, because if in the discharging of his official duties it became necessary for him to condemn the wares of a baker, for instance, he would thereby incur the enmity of that particular baker, possibly to the serious detriment of his business. Under these circumstances, said the opponents of the measure, it would be too much to expect of human nature that the pharmacist-analyst would not on occasion strain a point when called upon to make an analysis the results of which involved the business interests of some friend and patron.

For our country it may be said that while the contentions of the opponents of the measure are to a large extent true, the arguments in favor of the measure lose somewhat of their force mainly because of the lower standards of educational qualifications as set up by our licensing power the State Board of Pharmacy.

Therefore we may for the present at least look upon the resolution in question as an aspiration toward what should be rather than an asseveration of what is.

The young pharmacist now qualifying should bear this in mind, however, for at our present rate of progress it will not be a great while before this aspiration may be generally realized as it now is in a few isolated cases.

OCTOBER DAYS.

THESE half-way days are not good for the soda-water trade. The thirst-producing heat of Summer is past, and the bracing October weather is not cold enough to suggest hot soda. But Winter comes on apace (whatever that may mean), when hot chocolate, hot coffee, hot clam bouillon, and hot beef tea will have their day. Are you ready for those days? Have you something that goes just to the right spot in the anatomy of your customers?

We give elsewhere in this issue several formulas which have proven to be money makers. Get yourself a hot soda fountain and try some of these. The returns are large for the amount invested where the location is favorable, and where the business is pushed.

Push! That is the word that's on the front gate, the main entrance, and the inner door to the temple of success. It is an invaluable quality.

Push, and keep at it.

In a Southern drug store, where a miscellaneous stock was kept, were two young clerks who had that quality. Each selected some one article to push, and made it a point to sell one of these articles whenever it was possible. It mattered not what brought the customer into the store. When John had supplied his known wants he sprung a lantern on him, if he thought there was the barest possibility of selling one. In this way a gross of lanterns was worked off within a few weeks.

Ben pursued the same tactics with hair brushes, and with an equally gratifying result. Some other special item was then taken up The business prospered, and now these two clerks who pushed are proprietors of the most successful drug store in their section.

And observe, they Specialized.

This is an age of specialization, in business as in science. Specialized effort, if rightly directed, is the most successful. Specialize in your effort to sell sundries and encourage your clerks to do so.

The result of a given amount of effort will almost invariably be better, and will always be more quickly perceptible when that effort is specialized,

Therefore Push and Specialize.

THE NEW PHARMACOPŒIA

II.

AS was to be expected, the Seventh Decennial Revision of the United States Pharmacopœia is receiving the criticism, both adverse and favorable, which appears to be the necessary concomitant of all new publications. In a review which is marked by many evidences of painstaking care, though evidently prepared with some degree of haste, GEORGE M. BERINGER, A.M., Ph.G., who announces himself "a practical pharmacist," or at least offers his observations as viewed from "the standpoint of a practical pharmacist," is disposed to find fault with the work on the ground that it is too scientific in character. He seems to see in its pages "evidence of the want of that *practical* knowledge of the pharmacy of to-day acquired only by personal contact with customers," and concludes with regard to the errors which have been overlooked by the committee of revision, that "the work is far from perfect." Now we hold that such a manifest disposition to find fault displayed in the opening paragraphs of a review appearing in the *American Journal of Pharmacy* is just a little indicative of bias, and cannot but suggest the captious critic. The typography of the work, which has been universally admitted to be beyond compare in works of its kind, and which has elicited unstinted praise from one so well qualified to judge as MARC BOYMOND, editor of the Paris *Repertoire de Pharmacie*, is dismissed as "fair." If the committee of revision will be guided by Mr. BERINGER, future editions of the pharmacopœia will appear without the history

of past conventions, and the work contain ten pages less of historical matter. This suggestion is worthy of consideration, but the one which follows advising the elimination of part of the tabular statements relative to calculations and testings will meet with small support, since the reason given, namely, that the tables referred to "will appear in the dispensatories and various compends," is very weak.

Its weakness will be apparent when the fact is brought to mind that the makeup and general character of the dispensatories and compends is dependent in a great measure upon the pharmacopœia itself. The writer makes a strong point when he asks for an *official table of doses;* this, we admit, is a want which, though heretofore not supplied by the committee of revision, is, nevertheless, felt by medical men and pharmacists, and is regarded in many quarters as a real need. The error regarding the strength of infusions and decoctions, to which attention was directed in one of the August issues of the AMERICAN DRUGGIST AND PHARMACEUTICAL RECORD, is duly mentioned by Mr. BERINGER. The new figures for the weight of a fluid ounce of water does not find favor from the fact that the weight is recorded at maximum density in vacuo, pharmacists never conducting their operations in vacuo and "rarely at the temperature of maximum density." As the weight of a fluid ounce of water is uniform at 455.7 grains at ordinary temperature, and 456.392 grains at maximum density in vacuo, always bearing this relative proportion, we fail to see how the new figures and the method of obtaining them is to interfere with the practical operations of the pharmacist. If he is unable from the lack of proper instruments to conduct his operations in strict accordance with the official standard, in this respect, no harm will be done providing he bases all of his calculations on the old figures. The plea in favor of dismissing all figures relating to the Fahrenheit scale and the old system of weights and measures is commendable, and in line with what we have always advocated—namely, the adoption of the new system *in toto* and entire doing away with the clumsy expedient of transposing the different values. When persons using the metrical system of weights and measures train themselves to think exclusively in that system in conducting the operations of weighing and measuring, a thorough understanding of its workings will follow as a matter of course.

The assay processes for cinchona and opium and for preparations of opium and nux vomica receive fitting and favorable mention; the modified Squibb process for the assay of opium being particularly commented upon. Regarding the last mentioned, in which the water-washed crystals of morphine are directed to be washed with alcohol saturated with morphine prior to final treatment with ether, it is deemed advisable to caution the operator against allowing any evaporation of alcohol to take place, since, were this to happen, it is obvious that a slight error would be introduced.

In presenting his views of the new pharmacopœia, Mr. BERINGER has allowed no error however trivial to escape his observation. Thus he notes with particular care the neglect of the committee of revision to specify distinctly in the official process for the assay of extract of nux vomica the use of *distilled* water in conducting the determination of total alkaloid present. But what kind of a pharmaceutical chemist is he who would attempt any delicate alkaloidal determination, in which water played a part, without the use of water which had been freshly distilled? However, there is some reason for the objection; and the precisian of the committee will undoubtedly be well pleased to receive this evidence of the appreciation of a practical pharmacist for extreme precision in pharmacopœial directions.

Regarding the vegetable drugs dismissed from the pharmacopœia, Mr. BERINGER agrees that "none were sufficiently used to be retained," and is of opinion that cascarilla, chelidonium, illicium, melissa, and sabina should also have been excused, as they would not be missed. We must admit it is a little surprising that such obsolete remedies as these referred to should find place in so modern a work as the Seventh Edition of the U. S. Pharmacopœia, but an explanation for their retention may be found in the fact that each of the drugs mentioned are yet regarded as useful in different parts of the country. The exclusion of caulophyllum, inula, marrubium, staphisagria, pulsatilla, and toxicodendron is thought to be in order for the reason that no official preparations of these drugs are recognized, and from the fact as well that they are never prescribed in the crude state.

Mr. BERINGER is mistaken in supposing that the changes which he suggests in the titles of alkaloidal salts, would receive any indorsement from pharmacists. Granting that the composition of alkaloidal salts of the haloid acids would be indicated more clearly by the substitution of the term hydrochloride for hydrochlorate and hydrobromide for hydrobromate, we fail to see how uniformity in chemical nomenclature would be advanced by the change; for in making any such change the titles of salts of the oxygenated acids would also have to undergo revision, and it is easy to conceive what the ultimate result of such extreme nicety might be. Physicians who have prescribed morphine sulphate for perhaps half a century under that or a similar title (bearing in mind that the termination *ine* is comparatively recent as applied to alkaloids) would view with dismay the necessity of prescribing this drug under the odd title of *morphine hydrosulphide* or at the least *morphine hydrosulphate*. We had hoped that this old controversy anent the nomenclature of salts of organic bases was at an end and the reasons for adhering to the present nomenclature thoroughly understood, but this is evidently not so and further light on the subject is evidently needed. The committee of revision is best qualified to give definite information in these matters and might render valuable service in the premises by publishing a brief explanation of the reasons which led them to employ the present system of naming alkaloidal salts.

(Written for the American Druggist and Pharmaceutical Record.)

A FRENCH VIEW OF THE UNITED STATES PHARMACOPOEIA.

By Marc Boymond,

Pharmacien de 1re Classe, Associate Editor of the *Repertoire de Pharmacie.*

This edition which contains 114 pages more than its predecessor is distinguished throughout by a notable enlargement of the text relating to descriptions of drugs; their characters of identity and purity, assay and volumetric determination; the preparation and keeping of reagents; alcoholometry and optical rotation; and the determination of tables of equivalent and saturation, etc. Descriptions of a similar kind have already been introduced into the more recent of the European pharmacopœias, but in a form less clear than that observed in the pharmacopœia of the United States, the text of which has been happily increased without making the mistake of converting the work into too much of a didactic treatise. In Germany where the inspection of pharmacies is an undertaking of a serious nature, and the examination of drugs an operation performed daily the official formulary is increased in proportion. Other nations have followed this example. The conditions of pharmacy have undergone a profound modification during the past thirty years, and to the altered condition of things we must conform. The stock in trade of a pharmacy has undergone almost a complete change owing to the discoveries—both lasting and ephemeral—of modern chemistry. It should then be easy of understanding why these men are so careful of their art in a country of extreme liberty; it is in order that their *confrères* may practice their profession under the most favorable conditions both from a technical and a professional point of view.

In the new edition one change of importance is the definite and exclusive adoption of the metric system. In the preceding edition the values are described sometimes in parts, sometimes in grammes and sometimes in grains. Now, the solids are indicated in grammes and the liquids in cubic centimeters. The old system of weights and measures will doubtless continue to be more or less used for some time to come by certain physicians; but little by little this system will disappear to take its place among others of a bygone time, leaving the British pharmacopœia alone in the use of this cumbersome and antiquated method.

A number of changes have been made in the Latin and English official titles. Above all we note the change made in the nomenclature of chemical substances which consists in placing the name of the base first: *morphine hydrochlorate* being now used in place of *hydrochlorate of morphine* as heretofore employed.

In the *formulary*, properly so called, the additions and dismissals effected are notable, though fewer in number than those of the edition of 1883. Prominent among the articles dismissed we remark the *abstracts*—a form of dried extract with the addition of sugar—the elision of which is not to be regretted; their absence will not be missed since they have never been received with favor even in the United States. The additions in the new work have been selected with prudent care, this being especially noticeable with regard to remedies of comparatively recent introduction. In passing we note the addition of glycerin to certain of the soft extracts; the addition of about 1 per cent. of alcohol to chloroform and the adoption of a morphine standard of 13 to 15 per cent. of powdered opium.

We naturally cannot go into any great details in this brief glance at the more characteristic features of the new edition, but we willingly express our appreciation of the book in its *ensemble.* The new pharmacopœia of the United States does honor to its committee of editors, who represent the most distinguished of the members of the pharmaceutical body, having at its head Charles Rice as chairman. It is a work written by practitioners for practitioners, perfectly clear in its purely scientific and analytical indications, concise and very judicious. It is admirably helped out by the beautiful American typography in which nothing is neglected likely to contribute to form and appearance and which has been influential in converting a simple text book into what may be termed a work of art. The former editions were much appreciated in Europe by those engaged in pharmacy who were qualified to regard the book from different view points. This new decennial revision will meet with equal success, and we must offer our congratulations to its intelligent editors.

(Written for the American Druggist and Pharmaceutical Record.)

NOTE ON THE CHEMICAL NOMENCLATURE OF THE U. S. PHARMACOPOEIA.

By Prof. John Attfield, Ph. D., F. R. S., etc.,

Reporter of the British Pharmacopœia to the General Medical Council.

I had understood that the names or headings of the monographs of the U. S. P. would not be altered (*magnesii sulphas*, sulphate of magnesium, for example), and, indeed, the actual heading or title (*magnesii sulphas*) has not been changed. But the English rendering—I cannot call it translation—of the title has been turned round, so as to harmonize with the practice of the majority of modern chemical authors. Thus, for example, it is no longer sulphate of magnesium, but magnesium sulphate. From the literary point of view it is awkward, if not solecistical, for the Latin heading to express one name and the English immediately underneath it to express another name; nevertheless I think that the compilers were wise, as well as politic, in making—what the majority of mankind so dearly love—a compromise. They might, with the British, have continued to give such names as *magnesii sulphas*, sulphate of magnesium, or, with the Germans, have given *magnesium sulphuricum*, magnesium sulphate. They have steered a middle course, preliminary, doubtless, to an abandonment of the Latin channel altogether.

In response to your courteous inquiries I would state that I have produced the Fourteenth American and Fifteenth British editions of my manual of chemistry concurrently, and the British is just published, but the dispatch of the manuscript of the Fourteenth to my United States publishers will be delayed by the time involved in altering almost every paragraph in the work to adapt it to the literary change of front of the chemical nomenclature of the new U. S. Pharmacopœia.

(Written for the American Druggist and Pharmaceutical Record.)

A SCOTCH REVIEWER.

By Wm. Mair,

Late Chemist to the Royal Infirmary Dundee, Scotland.

The United States Pharmacopœia is always regarded by us in Scotland as something distinctly in advance of our own. The processes represent good pharmacy, the data are correct and the requirements precise and not ultra scientific. It must be admitted that there is more of the spirit of advance exhibited in the U. S. Pharmacopœia than in that of Great Britain.

It is disappointing that it has not been found practicable to increase the number of assay processes, but the difficulties in the way of this are not easily surmountable.

The elaborate description of the process of percolation might have been simplified by the adoption of

what some pharmacists would consider an improvement in the apparatus employed. Nothing, in my opinion, can excel for simplicity and efficiency the displacement apparatus made by the York Glass Company, of England. It was still further improved by a Sprengel pump attachment, devised by Mr. Charles Arthur, chemist to the Royal Infirmary of Edinburgh.

The new word *emulsum* provides a desirable differentiation from the general term "mixture."

The provision of indication as to what the various tests employed are intended to exclude is a great advantage, for while the work is not intended to be a students' manual this will save reference to other works—a consideration to the busy pharmacist.

In following the positive instructions of the convention the committee of revision has had to exclude such an important drug as antipyrin, an omission which acetanilide does not make up for. Among the additions strontium bromide is up to date; it is having a run just as present I do not know that eriodictyon has quite justified the honored place it has obtained in the list of official drugs. The omissions include some useless plasters, but I cannot imagine why extract of malt should have been discarded. It is still an important agent with us.

The tables for gasometric estimations and optical rotation are new and useful; they will prove more so as the coming pharmacist gets educated up to them.

American pharmacists have every reason to be proud of their *vade mecum*; it is an index of the position of their profession in America and in every way well suited to fulfil its requirements.

(Written for the American Druggist and Pharmaceutical Record.)

ALTERED COPIES.

By Ferdinand Lascar, Ph.G.

What at first sight appeared to be one of the proverbial blunders of the incompetent druggist—he that is so oft quoted by the newspaper paragraphist—was brought to my attention recently by a physician. Handing me what seemed to be a prescription written by him not over a month ago, he requested with some indignation in his tone to know the meaning of the first item on the prescription, which he remarked was unfamiliar to him and certainly not the title which had appeared in the original prescription. It only required a glance, with the doctor's explanation, to see that the pharmacist who filled the original prescription had in copying altered the name of one of the ingredients so as to make it difficult for the patient to get the mixture compounded in another pharmacy. The prescription was simple, reading as follows:

Tinct. opii,
Tinct. lavand. Co.
Tinct. valerian.
Spirit. ammon. arom.....āā ℥ss.

In the copy about which the physician made complaint *Tinctura opii* had appeared and in its place was substituted the words *Tinct. thebaicæ*. While it is true that most druggists are familiar with this ancient synonym for tincture of opium, there is no doubt that it would prove a stumbling block to many pharmacists, as they would be in doubt whether to dispense the aromatic wine or the tincture. The question also arose as to the right of the druggist to alter a prescription. Certainly it is a case in which, if it came to be decided on its legal merits, it would go hard with the druggist. The motive in altering a prescription in this way is of course evident, and arises, as before stated, from the desire of many druggists to retain custom without regard to the means employed. My own experience with altered prescriptions is that the copier has not always been correct in the choice of a synonym; the errors arising in some instances from the use of titles which have been applied at different times to widely different drugs. Other cases have come to my knowledge where local titles have been employed; this latter being perhaps the most senseless of any of the methods of altering a prescription. As an example of this I will instance a prescription presented to me in the commercial capital of Louisiana; it read thus:

Magnes. sulph.... ℥iss
Acid. sulph. dil.... ♏i
Aquæ Crotonis, q. s. ad.... ℥vi

I am convinced that the prescriber, who has long since passed away but who was known in life as an earnest and learned man, would never dream of writing such misleading nonsense as *Aquæ crotonis*. Equally misleading was the copy of a prescription which read:

Aquilæ albæ.... gr. v
Pulv. rhei.... ʒ
Magnes. carb.... ʒii

M. ft. pulv.

In this case the prescriber happened to be well known to me, and I was made aware that *Aquilæ albæ* did not appear in the original prescription, what was ordered being "Calomel gr. v." Now *Aquila alba* is a very old name which was in use by the alchemists to designate various substances, among others sublimed sal ammoniac, precipitated mercury, arsenic and the philosophers' stone.

Another prescription which had evidently undergone changes in the copy read as follows.

Magisterii sulphur.... ℥j
Sal mirabil. g.... ℥ii
Tartar. depurat.... ℥iii

Now *Magisterum sulphuris* is washed sulphur, although a colleague to whom I showed the prescription was convinced it stood for precipitated sulphur. Sal mirabil. g. is of course Glauber's salt or sulphate of soda, but as written, the title is misleading, due to the abbreviation of "Glauber" to g. in lower case. A prescription in which the copier had endeavored to display more than the usual smartness turned up the other day. It was intended for a hair tonic and read:

Quinin. sulph.... ʒj
Tinct. lobeliæ
Tinct. cantharides āā.... ♏ii
Glycerin.... ℥j
Spirit. tafiæ. q. s. ad.... ℥viii

Here I ascertained that the original called for rum; if the copyist was a stickler for Latin he might have used the well known title *Spiritus sacchari*, which would been understood by the majority of pharmacists. By far the most curious transposition among the number which I have encountered in a lengthy practice was the following, which proved a decided stumbling block, and which I was unable to decipher until after a consultation with the physician. The copy read:

Æthiops alcalisati.... gr. xv
Sacch. alb.... ʒss

M. ft. pulv.

The substance ordered was of course *hydrargyrum cum cretæ*, of which each powder was to contain 2½ grains.

The wilful alteration of titles in a prescription by the pharmacist who is requested to furnish a copy is something which cannot be condemned with too much severity, as it leads in many instances to trouble between physician, pharmacist and the patient, from the fact that prescriptions filled in one pharmacy present an appearance of decided difference from the prescription as dispensed in another. The ethical side of the case should not be lost sight of. Pharmacists, above all men, should be actuated by motives higher than those that spring from mere commercialism; the practice of our profession calls for exactness—but above all a conscientious regard for its ethics and advancement toward a higher standard.

Pharmaceutical Progress

Nasrol is the sodium salt of caffein sulphonic acid which is being used a a diuretic.

Benzoin alumina cotton is made by boiling benzoin in solution of aluminum acetate, straining, impregnating cotton with the liquid and drying. It has the advantage of ferric chloride cotton as a hæmostatic of not staining —*Pharm. Post.*

The pink color in calcium chlorate solution developed when chlorine is lead into milk of lime in the first step in the manufacture of potassium chlorate has been proven by the spectroscope to b due to the presence of permanganate.—*Chem. Zeit.*, 1893, p. 653.

Preservation of Eggs.—From the result of his investigations Körndörfer concludes (*Arch. f. Hygien.*, xvi., 4) that the best method of preserving eggs is to warm them for two days to 50° C. [122° F], or to coat with shellac or varnish They keep better also in dry than in damp places.

Rubidium iodide has much the same therapeutic qualities as has potassium iodide, but it is claimed (*Drog. Zeit.*) that it is free from the deleterious effects which the potassium salt exercises, particularly on the heart. Rubidium iodide appears in white crystals, stable in the air, has a milder taste than potassium iodide and is even somewhat more soluble in water than the latter salt.

Pilocarpine in Croup.—Sziklai (Aertzl. Prakt., 1893, p. 914) recommends pilocarpine hydrochloride in croup in doses of 0.02 to 0.07 grammes (three-tenths to 1 grain) *per day* for children of 15 years and of doses of 0.08 to 0.10 grammes (1 to 1½ grains) *per day* for adults. The false membrane is thrown off by the increased exudation from the mucous membrane caused by the pilocarpine, and if not removed by natural means, may easily be removed by the physician.

Estimation of Fat in Flour and Bread.—Polenske recommends the following method (*Pharm. Zeit.*, 1893, 512): A mixture of 10 grammes of powdered bread, 50 Cc. of water and 1 Cc. hydrochloric acid (sp. g. 1.124) is digested on boiling water for 1½ hours, then neutralized by the addition of about 1 gramme of marble dust, 50 Cc. of chloroform added and shaken for 15 minutes. After standing some hours 25 Cc. of the chloroform is drawn off with a pipette, filtered, evaporated, and the residual fat weighed.

For Removing Hairy Down.—Dr. R. B. Morison, in a paper read before the meeting of the American Dermatological Association, says: "There are many women who wish to get rid of the white lanugo down on their faces, upon whom it seems that electricity cannot be used for fear of stimulating the growth of the surrounding hair. and the appearance of permanent scars. If a preparation of yellow sulphate of arsenic and quicklime, of equal parts, made into a paste with hot water, be allowed to dry on the hairy skin, it removes the hair for ten to twenty days, and sometimes permanently. On the other hand, nothing seems to take the place of electrolysis when there are a few strong hairs growing from moles, in the removal of moles themselves, in angioma, or in permanent small red spots.

Titration as a Means of Assaying Drugs.—In a paper presented at the recent meeting of the American Pharmaceutical Association, Chas. Caspari, Jr., and Alfred R. L. Dohme came to the conclusion (1) That titration with volumetric acid solution is the most reliable and trustworthy method of assaying alkaloidal drugs known to us to-day. (2) That gravimetric results as heretofore generally reported and made use of are in many cases very wide of the truth, and hence unreliable. (3) That some of the methods employed are better adapted to some drugs than to others.

Cocaine and Pilocarpine Salts with Calomel.—Schell first observed that when cocaine hydrochlorate and cocaine were mixed in the presence of water the mixture turned black. Lenz observed that this reaction was even stronger with pilocarpine salts than with salts of cocaine, and attributed the coloration to the presence of mercurous oxide. A. Scheider, however, is of opinion (*Pharm. Centralh.*, 1893, p. 519) that the reaction consists in the formation of a double salt of the respective salts with mercuric chloride and that the separated body is metallic mercury, not mercurous oxide.

Separation of Lead and Silver.—P. Jannasch proposes (*Ber. D. Chem. Gesell.* 1893, 1500) the following method of procedure: Dissolve 0.5 grammes of the nitrate in 100 Cc. of water, add 2 Cc. diluted nitric acid, heat to the boiling point, precipitate with potassium dichromate solution, add 15 Cc. diluted ammonia water (1 to 3) and warm on the water bath 15 minutes. When cool filter off and wash the lead chromate 3 or 4 times with weak ammonia water. To precipitate the silver acidify the ammoniacal filtrate slightly with nitric acid, when the silver will be precipitated as chloride.

Acetyl and Propionyl Compounds of Oxyphenylurethane.—Para-oxyphenylurethane and its ethers, on heating with glacial acetic acid, acetic anhydride or acetyl chloride, yield acetyl compounds of the formulas

$$C_6H_4(OH)N\begin{cases}COCH_3\\COOR\end{cases}$$

$$\text{or } C_6H_4(OR_1)N\begin{cases}COCH_3\\COOR\end{cases}$$

The propionyl compounds are obtained in a similar manner. Both series of compounds are distinctly characterized as well crystallized bodies, difficultly soluble in cold water and possessing strong antipyretic and analgesic properties.

Purification of Toluol.—Priswell (*Chem. News*) recommends that crude toluol of a boiling point of 110 to 130° C. be shaken with one-tenth its volume of sulphuric acid of a specific gravity of 1.803 for 4 hours, allowed to settle, the supernatant liquid decanted and washed with a sufficient quantity of soda solution, and then rectified. The sulphuric acid is not strong enough to affect the toluol, but is strong enough to dissolve a part of the paraffin-like impurities present and to reduce the remainder through polymerisation to a less volatile form.

Chlorol is a new French disinfecting fluid, said to have the following composition (*Arch. Méd. Belge*):

Corrosive sublimate	of each 1 part
Sodium chloride	
Hydrochloric acid	
Copper sulphate	3 parts
Distilled water	1,000 parts

The sodium chloride is added to render the solution more stable; the hydrochloric acid, to prevent the decomposition of the corrosive sublimate in presence of albuminoid matter; and the copper sulphate, for its vomitive effects—in case the chloral should be taken internally by mistake.—*Am. M. S. Bull.*

Sterilization of Hypodermic Injections.—According to Moriacci (*Farmaceuta Italiano*) micro-organisms will develop in solutions of strychnine, curara, eserine, morphine, quinine and atropine. Sterilization by means of heat does not, he states, alter the effects of strychnine or quinine at all. Whereas it so alters that of morphine, atropine and eserine that a larger dose than otherwise necessary, must be employed. He urges the necessity of sterilizing the syringe. For atropine and eserine he advises the addition of 1 per cent. of their weight of mercuric chloride, which completely sterilizes, but is not present in sufficient quantity to be harmful in the least. For morphine he says he knows of no method of sterilization that will not alter the effect of the drug.

Arsenic and its Compounds.—Dr. Retgers finds that there are only two well defined allotropic modifications of arsenic, and that they closely correspond to the two forms of phosphorus. A silvery-white hexagonal form accords with the red phosphorus, and a black variety, crystallizing in regular octahedrons, corresponds with ordinary yellow phosphorus. It is suggested that there may be a third modification with crystals belonging to the monoclinic system. The brown spots formed upon the cold porcelain, in Marsh's test, are shown to consist of arsenic hydride, AsH, produced by the partial dissociation of the gaseous AsH_3. This is soluble in boiling xylene and may thus be distinguished from elementary arsenic, which is totally insoluble in xylene. Dr. Retgers also adduces evidence which seems to prove that a lower oxide of arsenic, probably As_2O, is capable of existence (*Zeit. für. Anorg. Chem.*, iv., Aug.).

Cinchona Alkaloids.—Grave gives the following modification of De Vrij's method for detecting cinchonidine salts in those of quinine. One gramme of the sulphate of quinine is dissolved, with the aid of heat, in 40 Cc. of distilled water; to the warm solution 6 Cc. of solution of potassium chromate (5 grs. K_2CrO_4 in 95 of water) are added. Most of the quinine is thus precipitated, and to insure complete precipitation the mixture is allowed to stand for a night at a temperature not exceeding 150° C. It is now filtered through powdered glass, and to the solution is added nine or ten drops of a five per cent. solution of sodium acetate. If the quinine salt is pure the solution will remain quite clear for several days. If cinchonidine be present, the liquid becomes turbid, according to the quantity present. This reaction is quantitative, and the cinchonidine may be collected and weighed.—*Jour. de Pharm. a'Anvers.* Through *B. and C. Druggist.*

Separation of Arsenic from Antimony. L. Garnier. (*Jour. Pharm. Chim.*, 1893 [5], xxviii., 97; through *The Analyst*).—Dragendorff's method for separating these two metals in toxicological analysis consists in treating the mixed sulphides with ammonia, fusing the undissolved antimony sulphide, still containing some arsenious sulphide, with sodium nitrate, and dissolving any sodium arsenate which may have been formed with water, in which the sodium antimoniate is practically insoluble. The author finds that ammonia always dissolves some antimony sulphide, together with the arsenious sulphide; he therefore recommends Ritter's method. This is performed by dissolving the mirror of arsenic and antimony obtained by Marsh's process in aqua regia and treating the solution with a mixture of tartaric acid, magnesium sulphate, ammonium chloride, and excess of ammonia. The arsenic is precipitated as ammonium magnesium arsenate, and the antimony is thrown down in the filtrate by hydrogen sulphide.

New Volumetric Methods for the Valuation of Fowler's Solution and of Tartar Emetic. S. Gyory. (*Zeit. Anal. Chem.*, 1893, xxxii., 415; through *The Analyst.*)—Five Cc. of Fowler's solution (*Liq. Arsenicali*) are diluted with 10 Cc. of water; 0.5 to 1 gramme of potassium bromide is added, and the whole acidified with 10 per cent. hydrochloric acid; a drop of methyl-orange solution (1 : 1000) is added, and the solution titrated with $\frac{N}{10}$ potassium bromate solution until the red color disappears. The addition of a drop too much of the potassium bromate solution will be revealed by the yellow color of the bromine. For the similar treatment of tartar emetic 03 gramme is taken, and 25 Cc. of 10 per cent. hydrochloric acid are added. A simplification of the process may be effected by pretermitting the addition of potassium bromate; for the oxidation of arsenious or antimonious oxide by potassium bromate in presence of hydrochloric acid must yield hydrobromic acid, which will be ready to react with evolution of bromine when an excess of potassium bromate has been added.

Sardinine, a new fish ptomaine, has been obtained by Griffiths (*Chem. News*, 1893, p. 45), who describes it as a white, crystalline, water-soluble substance slightly alkaline in reaction, precipitating as a white crystalline hydrochloride with hydrochloric acid, forming yellow crystalline compounds with platinum and gold chlorides, a greenish one with phosphomolybdic acid, yellowish white with phosphowolframic acid, yellow with picric acid, and giving a precipitate with silver nitrate and with Nessler's reagent. It is toxic, producing vomiting, diarrhœa and death. It was obtained from decomposed sardines and is presumably the cause of such cases of poisoning as have followed the eating of sardines. Among the other ptomaines hitherto isolated from fish are: Parvaline $C_9H_{13}N$, hydrocollidine $C_8H_{13}N$, scombrine $C_{17}H_{38}N_4$, muscarine $C_5H_{13}NO_2$, gadinine $C_7H_{16}NO_2$, ethyldiamine $C_2H_8O_2$, mytilotoxine $C_7H_{15}NO_2$, collidine $C_8H_{11}N$ and coridin $C_{10}H_{15}N$. The first three were isolated by Gautjer and Etard from mackerel, the fourth, fifth, sixth and seventh were isolated by Brieger, and the ninth and tenth by DeConinck. According to Griffiths the sardinine has the formula $C_{11}H_{11}NO_2$.

Alkaloidal Value of Datura Stems.—As a result of investigations made by him, Alfred R. L. Dohme concludes that the stems of datura stramonium are richer in alkaloid than any other part of the plant. Next in percentage are the seed, then the leaves, and finally the roots. It is also evident that some slight loss occurs during the process of drying. A similar investigation of the leaves, stems, roots and seed of the plant Hyoscyamus Niger has been made, the plants having been gathered in June and imported from Hungary for that purpose. The result was to show that the stems and seed contained little or no alkaloid, while the roots contained 0.017 per cent., which is so small that for all practical purposes it may be regarded as none. The residue in the case of the stems and

seed did not neutralize any volumetric acid solution, although there was a slight gravimetric residue, from which it is inferred there is either no alkaloid present or alkaloid which possesses no alkaline reaction. The leaves yielded 0.173 per cent. alkaloids by titration. Schoonbrodt has found that henbane leaves gathered in June yield less than those gathered at other times, and also that seeds gathered in June yield no alkaloid.

Preparation and Valuation of Iodoform Gauze. —Gay (*Repert. de Pharm.*) uses a mixture of ether and benzin as a solvent for the iodoform and also for the "finish" used. The liquid must be completely absorbed by the gauze. This is packed together before it is entirely dry to avoid loss. The ether and benzin will gradually evaporate through the wrappers. In spite of this precaution Gay reckons upon a loss of from 10 to 15 per cent. as unavoidable, and provides for it by using a corresponding excess of iodoform. Gay's method of estimation is as follows: He operates on a full piece, one meter, or at least half a meter of gauze. Roll up, place in a Soxhlet extraction apparatus and pour on sufficient alcohol to cover it. This apparatus is provided with a back flow condenser and attached to a flask, into which an alcoholic solution of caustic potassa is introduced. If a ten per cent. gauze is operated upon, the strength of the solution should be 5 grammes potassa to 100 Cc. alcohol. The apparatus is placed on a water bath and heated until the gauze and the alcohol are entirely decolorized. The alcoholic liquids are unitedand diluted with water to 250 Cc., filtered, and 10 Cc. of the product are neutralized with acetic acid and estimated with normal silver nitrate solution. The process can also be applied to the direct estimation of iodoform.

Phosphates of calcium and their preparations have been written of by M. Carles (*Jour. de Pharm d' Anvers*), who points out that in the form of syrups the gelatinous phosphate preserves its initial qualities to the highest degree. The Codex, he points out, does not recognize the syrup of tribasic phosphate of lime, probably on account of the insolubility of the salt. He considers, however, that this preparation has a legitimate success in pharmacy, on account of the fact that, although the salt is in suspension, it is easy, by shaking, to render the mixture homogeneous, and moreover the phosphate retains its jelly-like form for a considerable time, and with this form it is easiest to assimilate. For this purpose the phosphate should be obtained in as great a state of hydration as possible. To insure this, 100 grammes of calcined bones are treated with 150 parts of hydrochloric acid, diluted with two or three times its volume of water. After suitable washing of the bones, the liquid is poured into an alkaline solution in order to precipitate the basic phosphate. With this process the amount of true phosphate can be calculated, and for a good syrup the following formula is used:

White sugar	655
Water	245
Gelatinous phosphate	100
	1,000

The bi-calcic phosphate has the preference for syrup in the Codex. Here acid is necessary to dissolve the salt. In the mono-calcic salt no acid is necessary, as the salt is dissolved directly in the syrup.

Caffearine is the name given a new coffee alkaloid isolated by Dr. Pietro Palladino (*Apoth. Zeit.*, 1893, 443) as follows: Boil the raw pulverized coffee with ten times its weight of water, to which a little milk of lime has been added, repeating until the coffee is exhausted. .Collect the decoctions, clear with a slight excess of lead acetate, filter and free the filtrate from lead by means of sulphuric acid. If strongly colored treat again with lead acetate and finally evaporate to a small volume, and remove the caffeine by shaking 10 or 12 times with chloroform. When free from caffeine evaporate to a syrupy consistency in the presence of an excess of sulphuric acid (how much and for what is not stated). Dilute and again evaporate to drive off the acetic acid. Separate the precipitate formed on the addition of water and filter warm through charcoal. On cooling add potassio bismuth iodide (Dragendorff's reagent) and the caffearine will precipitate. Separate the precipitate, wash thoroughly, mix in cold water, and warming this slightly pass a stream of sulphuretted hydrogen. Remove the iodic acid with sodium carbonate and repeat the treatment of the bisuth salt until the combination of caffearine and bismuth iodide shows itself in fine crystals. Finally when a pure solution of the caffearine is obtained in hydriodic acid concentrate it on a water bath, remove the hydriodic acid with silver oxide and add carefully hydrochloric acid, evaporate and crystallize. Wash the needles of caffearine hydrochloride with absolute alcohol and crystallize out of diluted alcohol. These crystals have the formula $C_{14}H_{18}N_2O_4HCl + OH_2$, are colorless, easily soluble in water and not affected by light. It acted as a narcotic poison in physiological experiments.

Caju, akaju or kadschu gum are the commercial names given a gum which exudes from the *Anacardium occidentale.* Peckolt describes it (*Zeitschrift d. österr. Apoth Ver.*, 1893, p. 501) thus: It occurs in hard cloudy stalactite like pieces, friable, externally barely perceptibly streaked, containing internally few air bubbles, more or less transparent, slightly iridescent and yellowish brown in color. The pieces are easily reduced by trituration to a fine brownish white powder which is as readily soluble as is gum arabic. A specimen contained 12.5 per cent. of moisture and 2.5 per cent. ash, of which 25.5 per cent. was lime. 98.6 per cent. was soluble, leaving an insoluble residue of 1.4 per cent. of cortical substance. The 10 per cent. aqueous solution was neutral, yielded a white precipitate on the addition of absolute alcohol, was thickened and clouded by potassium silicate and was thickened but not coagulated by the addition of borax. On adding solution of copper sulphate a dark blue mass separated out, from which, on boiling, traces of red copper oxide separated out, the liquid turning to a blackish brown. The solution becomes of syrupy consistence on addition of iron chloride without coagulating. No reaction occurs with ferrous sulphate nor with lead acetate. Mercury nitrate causes the solution to become cloudy, and after 12 hours forms a thick milky fluid. The gum was found to contain 83.2 of arabin, 0.7 per cent. of extractive, 0.236 per cent. of sugar, 0.339 per cent. of α resinic acid and 0.296 per cent. of β-resinic acid; the two being similar to that occurring in the bark. These and the brown extractive are the cause of the color in the gum. Trommsdorf found 4.8 per cent. of bassorin in the gum, but Peckolt found none.

Saccharin and Salicylic Acid. These two bodies appear to be found together in several liquids, especially beers and wines, and Mr. Hairs has published the account of a research on the best method of detecting them when so combined. The well known reaction of transforming the saccharin into salicylic acid by a potash fusion must, of course, be abandoned. So he employs the following process: The liquid is evaporated after being rendered alkaline, as usual, with sodium carbonate and washed sand added as it gets syrupy. The residue is exhausted with alcohol

and the liquid distilled. The residue is taken up with water and this solution, acidulated with sulphuric acid, is extracted with ether, which is separated and distilled, with the addition of a few drops of solution of sodium bicarbonate. The residue is dissolved in hydrochloric acid, and a slight excess of bromine water is added. The mixture is strongly agitated in order to agglomerate the precipitate of bromosalicylic acid, and after a short time filtered. The filtrate is freed from excess of bromine by passing a current of air through it, and then agitated with ether. The ether is separated and evaporated with a few drops of sodium bicarbonate solution and the characteristic sweet residue is left. By fusion with potash, the saccharin is converted into salicylic acid and tested in the usual way. A mixture of five milligrammes of saccharin and 7.5 milligrammes of salicylic acid is easily detected, and no fear need be entertained as to the possibility of any salicylic acid escaping precipitation, and so giving the reaction accredited to the saccharin in the filtrate; for experiments showed that ferric chloride did not give the faintest reaction with the filtrate after precipitation with bromine.—*Journal de Pharmacie d'Anvers.*—Through *British and Colonial Druggist.*

Change of Volume when Liquids of Different Densities are Mixed.*

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From time to time articles appear in our text books, journals and proceedings, offering a rule whereby liquids of different densities may be mixed to obtain any desired intermediate density. These rules are necessarily limited to those liquids which neither contract nor expand when mixed, but the fact has apparently been overlooked that such liquids are rare rather than common.

It has been known for some time that solutions of salts contract when diluted, or in other words, if an aqueous solution of a salt be diluted with water, the volume of the mixture is generally less than the sum of the volumes used in producing it. The same is generally true of indifferent liquids, though in a few cases expansion occurs rather than contraction, and in some no change in volume can be observed.

At the same time that this change in volume occurs, a slight change in temperature also takes place. There is commonly an elevation of temperature, but sometimes a lowering occurs, and in many cases no change in temperature is observed. This change in temperature bears no relation to the change in volume, since contraction may be accompanied by either an elevation or lowering of temperature, or with no change in temperature, and likewise an expansion in volume may be accompanied by a change in temperature in either direction, or with none at all.

In the present paper no attempt has been made to measure the changes in temperature, the object being only to call attention to the changes in volume which occur, to show how nearly universal this change is, and to demonstrate that it is of sufficient extent to render void the use of specific gravity rules, in most cases, for anything except approximate results.

To illustrate, a mixture of glycerin and water in the proportions and quantities used in the table appended, contracts 2.0 Cc., which may be taken as a mean of the contractions. The calculated gravity of such a mixture, provided no contraction takes place, would be 1.1369 (approx.), [89 Cc. × 1.2554 = 111.73 G. + 77 = 188.73 ÷ 166 = 1.1369]

But the contraction changes the quantity to 1.1508 (approximate), (188.73 ÷ 164 = 1.15079), a difference of two in the second decimal, which is verified by trial.

The apparatus by which the contractions were measured consisted of a double bulb of glass, the lower of which bulbs was extended into a tube 15 cm. long, graduated to hold 10 Cc. in $\frac{1}{10}$ Cc. 0.05 Cc. could be read easily in this tube.

The upper bulb was fitted with an accurately ground stopper, the two bulbs connecting at opposite sides.

In using it the lower tube and bulb was completely filled with the heavier liquid at 20° C. by means of a long-stem funnel, then the lighter liquid flowed into the upper bulb, which was filled to the brim, so that insertion of the stopper displaced a part of this liquid, and no air space was left in the apparatus.

The liquids were then mixed by inverting the apparatus and shaking, placed in a water bath kept at 20° C. until this temperature was uniform in the apparatus, then the contractions read upon the graduated tube.

The lower bulb and tube held 89 Cc., the upper bulb 77 Cc.

It was better for appearance sake to have used an apparatus holding equal volumes of each liquid; but as the only object was to show that there is a change of volume in most cases, and as an accurate table showing the extent of such change would be of little or no practical value, no attempt was made to construct such a table.

The common solvents and most soluble salts used in pharmacy were selected for experimentation, the salts being used in aqueous solution, nearly saturated. Gravities were all taken at 15° C.; the liquids mixed and contractions read at 20° C.

The results are given in the following table:

Heavier Liquid.	Spec. Grav.	Lighter Liquid.	Spec. Grav.	Contraction.
Acid, Acetic Glacial....	1.0615	Water	1.0000	5 Cc.
Acid, Citric.....	1.2620	"	1.0000	0.5 Cc.
Acid, Hydrobromic	1.2364	"	1.0000	None.
Acid, Hydrochloric	1.1754	"	1.0000	0.75 Cc.
Acid, Nitric	1.4210	"	1.0000	6.45 Cc.
Acid, Tartaric.....	1.3205	"	1.0000	0.8 Cc.
Alcohol.....	.8199	Ether	.7279	1.85 Cc.
Alum.....	1.0515	Water	1.0000	Very slight
Ammonia Water.....	.8977	"	1.0000	None.
Ammonium Chloride...	1.0765	"	1.0000	0.35 Cc.
Calcium Chloride.....	1.3070	"	1.0000	1.2 Cc.
Carbon Bisulphide.....	1.2711	Benzine ..	.6975	None.
Carbon Bisulphide.....	1.2711	Cotton Seed Oil....	.9329	None.
Chloroform.....	1.4896	Ether		2.1 Cc.
Chloroform.....	1.4896	Oil Turpentine.	.7279 .8751	Slight expansion.
Chloral.....	1.3615	Water....	1.0000	0.6 Cc.
Copper Sulphate.....	1.2077	"	1.0000	0.5 Cc.
Glycerin.....	1.2554	" ...	1.0000	2.0 Cc.
Iron Sulphate	1.2405	"	1.0000	0.6 Cc.
Magnesia Sulphate	1.2662	"	1.0000	1.2 Cc.
Oil Turpentine.....	.8751	Ether	7.279	0.5 Cc.
Potass. Bicarbonate...	1.1587	Water	1.0000	0.45 Cc.
Potass. Bromide.....	1.3557	"	1.0000	0.55 Cc.
Potass. Carbonate	1.4282	" ...	1.0000	2.55 Cc.
Potass. Iodide	1.6440	"	1.0000	0.55 Cc.
Potass. Nitrate	1.1377	"	1.0000	0.25 Cc.
Sodium Carbonate....	1.2281	"	1.0000	1.15 Cc.
Sodium Chloride	1.2052	"	1.0000	0.7 Cc.
Sodium Salicylate	1.1942	"	1.0000	0.7 Cc.
Sodium Sulphate	1.1198	"	1.0000	0.3 Cc.
Soda (caustic)	1.467	"	1.0000	6.8 Cc.
Syrup.....	1.3462	"	1.0000	0.45 Cc.
Zinc Sulphate.....	1.4717	"	1.0000	1.7 Cc.
Water.....	1.0000	Alcohol .	.8199	.465 Cc.

* Read before the Chicago meeting of the American Pharmaceutical Association.

The Vulcanization of Rubber.

The methods of vulcanization now in general use and which are based on the Goodyear experiments, are divided by the *Gummi Zeitung* into four classes as follows: (1) The cold process with sulphur chloride. (2) The cold process with sulphur chloride vapors. (3) The hot process with melted sulphur. (4) The hot process under steam pressure.

The melting point of crude rubber is about 200° C. when it melts into smeary black mass. Hot vulcanization is carried out at 150° C. with at least 8 per cent. of sulphur.

To vulcanize pure unmixed rubber on the surface of waterproof cloth a mixture of carbon bisulphide and sulphur chloride is used, though petroleum ether, or carbon chloride are frequently substituted for the carbon bisulpide. The finished wares are boiled in a lye made with soap and caustic soda.

Vulcanization with sulphur chloride vapor which is used in the manufacture of "sweat-cloths" consists in subjecting the articles to be vulcanized to the vapors caused by warming a vessel filled with sulphur chloride which is placed on the floor of an air tight chamber made of oak in which the articles are suspended.

Melted sulphur is used in vulcanizing pure rubber goods which are boiled for 15 minutes in a bath of melted sulphur at a temperature of 120° C. The excess of sulphur is then removed by boiling in potash lye. Goods made thus do not freeze or harden when subjected to cold.

The process generally used is that of steam under pressure. The duration of the process for hard and for soft gum is different and varies also with the proportion of sulphur present.

Soft rubber vulcanized under pressure contains on an average 10 per cent. of sulphur, of which only about 6 to 7 per cent. is in chemical combination, the remainder crystallizing out on the surface.

It is essential that during the process the steam pressure should be raised very gradually and that at the close it should be gradually lowered.

The length of time required for vulcanization depends not alone upon the sulphur contents, but also upon the proportion of foreign ingredients present.

Since the melting point of pure gum is 200° C., any too close approach to this temperature in vulcanization is to be avoided.

Vulcanization in the press proceeds much more rapidly than in the open kettle.

Hard rubber requires very different treatment from soft rubber. It generally contains from 30 to 40 per cent. of sulphur and this mass is subjected to a pressure of at least four atmospheres for a period of at least five to six hours. Formerly when hard rubber was vulcanized in water some 15 hours or more were required, and it is sometimes claimed that goods made according to that now obsolete process were better than those made by the processes now in vogue.

The Otto-of-Rose Crop.*

In the beginning of last week, as already mentioned in our Trade Report, the otto-of-rose market was thrown into a condition of sudden excitement by the news that the proprietors of the brand which is looked upon as the leading one in the Constantinople market had raised their price, at one bound, from 29s. 6d. to 37s. and 3d. per Turkish oz., f.o.b., Constantinople. This unusually large advance of about 25 per cent. came upon the trade somewhat unexpectedly, although there had been rumors in circulation for some time that, as the year wore on, higher prices might be looked for, especially as the firm who have now taken the initiative in advancing the quotation have been reported to have been making large purchases in an unobtrusive way for some time past. It may be presumed that these purchases have now been completed, and that there is very little, if any, oil left in the possession of the Bulgarian small peasants, who were well known to have only very small stocks at the beginning of the season. Otto-of-rose, after some years of very low prices, during which, it was said, the cultivator was almost shorn of all remuneration for his work, while the middleman could make but a small part of his accustomed profit, has now again arrived at a position which is likely to offer sufficient inducement to cultivators to lead to the further extension of the rose plantations in Bulgaria, and consequently, in time, to a still more prolonged period of depression. The crop this season has been a moderate one, 1,800 kilos., or 380,000 meticals, being generally named as its extent. There was some fear just before the period of distillation commenced that the total quantity obtained from the 7,500 stills, or thereabouts, which are known to exist in Bulgaria would fall considerably below the actual output, but favorable weather repaired much of the damage which the hard Winter was supposed to have caused. In 1892 the crop is said to have been 280,000 meticals, or 1,350 kilos., and this meagre yield at once led to an advance in price upon the quotations of 1891. Upon the same principle a further rise this year was certainly justified, for although the 1893 output has exceeded that of 1892 by about 450 kilos., there was at the opening of the present season scarcely an ounce of old oil in stock anywhere, while, on the other hand, nearly 250 kilos. of old otto-of-rose were known to exist in dealers' hands in the early Summer of 1892; besides which consumers were probably better stocked at that time than they are now.

Ten or more years ago a crop of 1,800 kilos. of otto-of-rose would have been looked upon as a very good one, and certainly not as justifying an advance in price. But rose-culture has extended considerably in Bulgaria, and there is every likelihood that it will continue to expand if the country continues to develop its resources peacefully. There can be little doubt, however, that the gradual depreciation of the oil which has followed the greater abundance of supply, and the growing demand for articles of luxury among all classes, have powerfully contributed to increase the consumption of otto-of-rose in soap making, perfumery and confectionery. The proof of this lies in the undoubted fact that, although the annual production of rose-oil has increased by about 25 per cent. within the last fifteen years, the stocks are generally much smaller now than they used to be. The total production of otto-of-rose in Bulgaria during the last ten years has been, as nearly as it is possible to estimate it, 20,250 kilos., representing an annual wholesale value of from 80,000l. to 90,000l. The lion's share of this is no doubt eaten up by the handful of Constantinople houses, who combine the exportation of otto-of-rose with the financing of the small Bulgarian growers. Still, it also represents the profit of a large and increasing number of Bulgarian wholesale manufacturers, and the livelihood of hundreds of small peasants; and it is to be hoped that the majority of these interested parties will consider whether they are acting wisely in adhering not only to antiquated modes of distillation, but also to their equally ingrained habit of adulterating their produce, when they must know that within a very short space of time they will have to encounter the competition of a large German firm of essential-oil distillers, with all the elements of success that commercial and scientific knowledge can give.

*From *The Chemist and Druggist.*

THE STARCHES IN SUBTERRANEAN STEM DRUGS.*

By Edson S. Bastin,

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In a preceding article published in this journal (for September 28th, page 181) an account was given of the starches contained in the most important of the root drugs. In the present one it is proposed to give a similar account of those that occur in the more important of the underground stems that are employed as medicines.

In most cases several different samples of the same drug have been studied, and in instances where notable differences occur two or more drawings of the same species have been made, to show the limits of variation. It will be observed also that each set of drawings includes a sufficient number of grains to illustrate all the important variations in form and markings that occur in the specimen studied. In those cases where the drug includes the attached rootlets as well as the

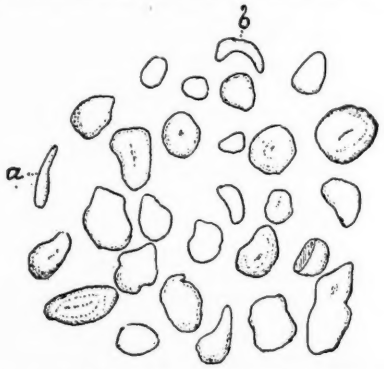

Fig. 1.—Starch of Aspidium Marginale.

rhizome, no considerable differences have been observed between the starches of the rhizome and those of the roots of the same species.

As was to be expected some subterranean stem drugs are destitute of starch, other related substances taking its place functionally. For example, none occurs in Iris versicolor, in triticum repens, in polygonatum giganteum, and in arnica montana. The fleshy scales of the bulbs of urginea scilla and of allium sativum are also destitute of it. Other drugs, as cypripedium pubescens and spigelia, contain it in small proportion, while most of the remainder studied contain it in abundance. Some rhizomes, however, as that of geranium maculatum, contain it abundantly in the season of rest, but are nearly destitute of it in the actively growing period.

It will be observed that some of the starches, as those of zingiber, galanga, colchicum, orris root, geranium, caulophyllum and jalapa, are strongly characteristic, while the rest are much less so, but still in most instances would serve as important aids in the identification of the drugs, and in detecting adulterations.

As in the previous article all the drawings have been made to the same scale and a magnifying power of 875 diameters has been uniformly employed.

The specimen of aspidium studied was A. marginale, and the starch is illustrated in Fig. 1. The grains are sometimes rounded in outline, but more commonly elongated or irregular, and they are often flat and thin; *a* and *b* in the figure are edge views of two of the grains. The hilum is variable in position, sometimes near the center, at others well toward one end. Rarely one or two stratification lines may be observed. Very few grains show a cross with polarized light.

The parenchymatous tissues of ginger contain starch in great abundance. The large grains are

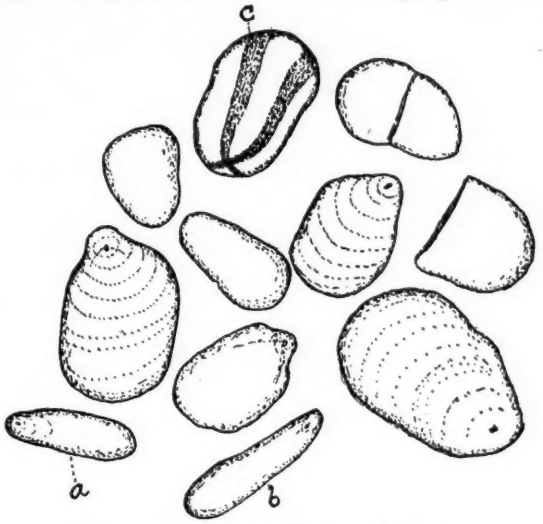

Fig. 2.—Starch of Chinese Ginger.

mostly ovate but sometimes elliptical in outline and decidedly flattened. *a* and *b* in Fig. 2 are edge views of two of the grains. The hilum is distinct and located close to one end, and that the smaller one, where there is a difference. It is occasionally, though rarely,

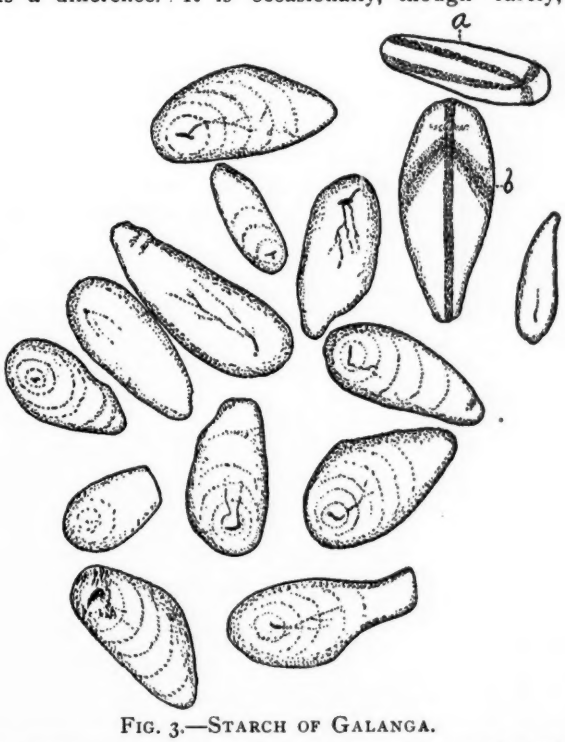

Fig. 3.—Starch of Galanga.

slightly fissured. The grains are sometimes fissured across near the middle or broken in two. Eccentric stratification lines are frequently faintly visible on the larger grains, if the light be properly manipulated. The very unequal-armed polarization cross looks, when the grain is viewed flatwise, as shown in *c*.

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The drawings are made from a specimen of Chinese ginger, but an examination of other varieties did not reveal any considerable differences.

The grains of galanga starch like those of ginger are large and have the hilum eccentric, but here the resemblance ends. The grains are mostly long ovate in outline but frequently somewhat irregular, the hilum is located near the larger end, is commonly fissured, and from the fissure delicate branching striæ run toward the smaller end. The eccentric stratification curves are faint, but, in good light, not very difficult to detect on the larger grains. *a* and *b*, Fig. 3, show the effects of polarized light on grains viewed edgewise and flatwise respectively.

In calamus the starch is abundant but small grained and the grains show no very characteristic structure.

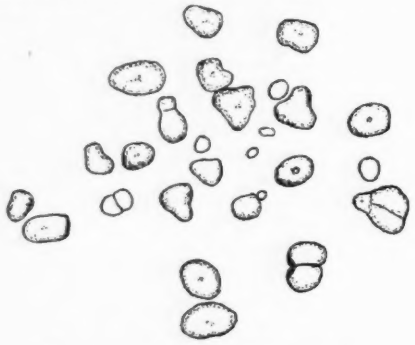


FIG. 4.—STARCH OF CALAMUS.

They are oblong, rounded, or more or less irregular in form, with a central or subcentral hilum and no observable stratification lines. Some grains are double and treble and others show one or two flat surfaces. Few are large enough to show the polarizing cross. This when visible is nearly equal-armed. Figs. 4 and 5 represent starches from two different specimens.

Only one specimen of orris root was studied, and it was uncertain from which of the species constituting

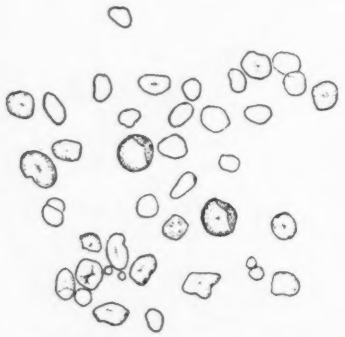


FIG. 5.—STARCH OF CALAMUS.

the source of this drug the specimen was derived. Whether the starches of iris florentina, I. pallida and I. germanica are all similar, or whether there are characteristic differences, are problems which remain to be investigated. The starch of the specimen studied is, however, quite characteristic. The grains are very abundant in all the soft tissues of the peeled rhizome. Most of them are elongated, rounded at one end and tapering toward the other, which is usually truncate. Some of the grains, however, are three-lobed, with one of the lobes truncate. Other grains take somewhat irregular forms. In the typical kind, first described, the hilum is located near the larger end and surrounded by one or more stratification curves. *a* and *b*, Fig. 6, show two grains as seen by polarized light.

The parenchyme of veratrum album is abundantly supplied with small, usually spherical or spheroidal

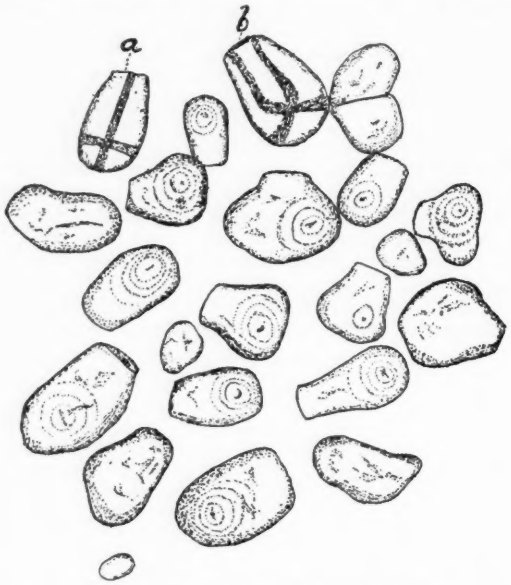


FIG. 6.—STARCH OF ORRIS ROOT.

starch grains, having a central hilum. In the larger grains one or more stratification lines are sometimes faintly discernible. Double grains are occasionally seen, and single ones with one, or rarely more than one, fracture surface. In the few grains large enough to show the polarization cross, that cross is rectangular and equal-armed. In Fig. 7, *a*, *b* and *c*, are shown respectively a double grain, one with a fracture surface and one as seen by polarized light.

Fig. 8 illustrates starch from another specimen of the same species, but probably from a different locality. It will be seen that the resemblance in all essential features is very close.

Fig. 9 represents starch from veratrum viride. There is such a close general resemblance between this and

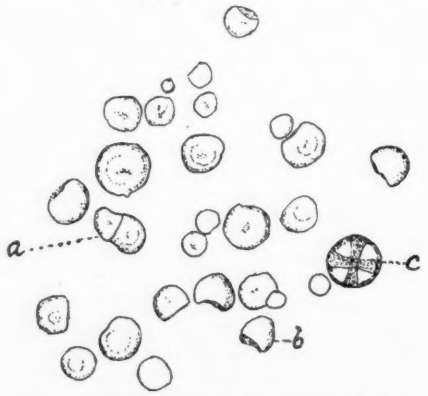


FIG. 7.—STARCH OF VERATRUM ALBUM.

that of veratrum album that it is doubtful whether the two drugs could be distinguished by the starches alone. The chief differences between them, so far as I have been able to determine from the specimens at hand, are that the hilum in veratrum viride is rather more dis-

tinct, and a much larger number of grains are compound; triple, quadruple, and even sextuple grains not being infrequent. But a much larger number of specimens from different localities should be examined to determine whether these differences are constant.

The grains of symplocarpus starch are so minute as to appear almost structureless under a magnifying power of 875 diameters. Neither hilum nor stratification lines are discernible, and they do not show a cross by polarized light. This drug, unimportant in itself, has attention directed to it because it has been ob-

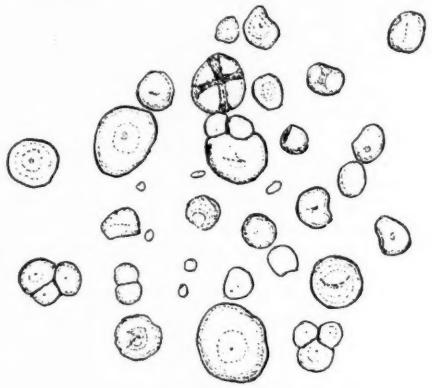


FIG. 8.—STARCH OF VERATRUM ALBUM.

served recently that it is sometimes substituted for veratrum viride. The rhizomes are cut into quarters longitudinally without removing the rootlets and dried. They then bear a close general resemblance to the genuine drug. Fresh and perfect specimens are of course readily distinguishable from the latter by the coarser rootlets, the thicker cortex, the larger wood bundles in the cortex, and by their possession of relatively few overlapping leaf-bases at the top as well as by the odor and taste; but in the case of fragmentary, or imperfect specimens in which many of the above char-

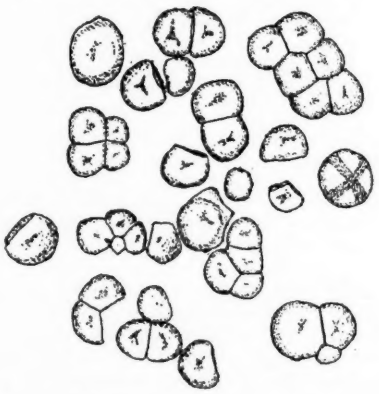


FIG. 9.—STARCH OF VERATRUM VIRIDE.

acters are difficult to observe, the marked difference in the starches would afford a most convenient and certain means of discriminating between them. The starch of this drug is shown in Fig. 10.

The starch of cypripedium pubescens was examined, but not that of C. parviflorum. The drug contains but a small proportion of starch, and this is small grained, and has no very characteristic structure. The grains are angular, flattened, with a sub-central hilum and without perceptible stratification lines. They are not infrequently double or triple. It is difficult, even in the larger grains, to observe any cross by polarized light. Fig. 11 shows a group of them.

The rhizomes of dioscorea villosa contain starch in abundance throughout the parenchymatous tissues. The grains are sometimes rounded, or more commonly oblong, more or less angular, or obscurely many-sided, usually simple, but sometimes double, triple or multiple, hilum central and rarely surrounded by one or two faint stratification lines. There is not infrequently a straight or angular fissure through the hilum, and this is surrounded like a penumbra with an area which refracts the light differently from the rest of the grain and which is usually stellate or angular in form, as shown in *a* and *b*, Fig. 12. *c* and *d* show grains as they appear in different positions when viewed by polarized light.

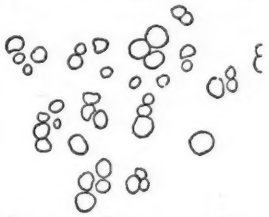


FIG. 10.—STARCH OF SYMPLOCARPUS.

Sanguinaria also contains starch in considerable abundance. The grains are mostly spherical, or nearly so, with the hilum central or subcentral, and not infrequently angularly fissured, the fissures, however, usually small, stratification lines evident only on the larger grains, and then not numerous, polarization cross usually rectangular, and equal-armed. Some of the grains are double, and rarely triple or quadruple ones are found. This starch is shown in Fig. 13.

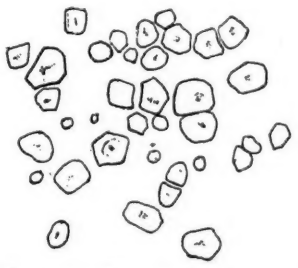


FIG. 11.—STARCH OF CYPRIPEDIUM PUBESCENS.

Specimens of the rhizomes of geranium maculatum that contain little or no starch frequently occur in the market. This, as

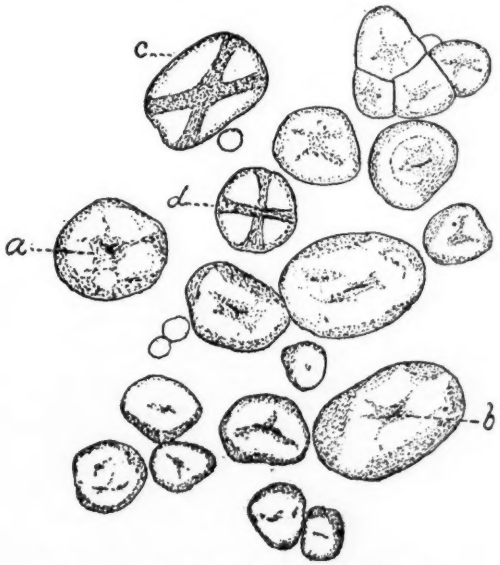


FIG. 12.—STARCH OF DIOSCOREA VILLOSA.

already suggested, is probably owing to the season of gathering, for other specimens contain it in considerable quantity. The grains are elongated, often two or three times as long as wide, usually thicker at one

end than at the other, frequently somewhat flattened, hilum usually eccentric, and located nearer the larger end, or sometimes nearly central, stratification lines seldom visible, and then but faintly, polarization cross usually oblique angled and unequal-armed. About the hilum is often seen an elliptical, rounded or somewhat lobed area, less refractive than the rest of the grain, as shown in *a*, Fig. 14. *b*, *c* and *d* are different grains viewed by aid of the polariscope.

The rhizomes of podophyllum gathered in late Autumn, or in very early Spring, have the parenchymatous tissues heavily charged with small grained starch. The grains are spherical or spheroidal, mostly single, but not infrequently double or triple, hilum central,

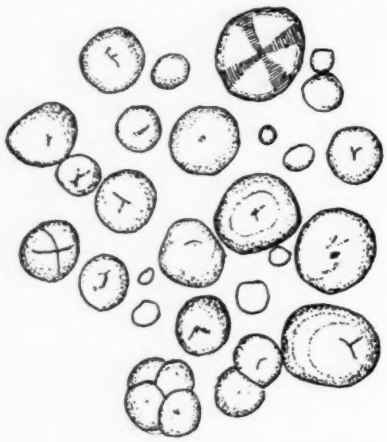


FIG. 13.—STARCH OF SANGUINARIA.

polarization cross rectangular and equal-armed, and no stratification curves observable. The hilum is seldom fissured, and is not distinctly visible, except in the larger grains. Fig. 15, *a*, shows one of the grains

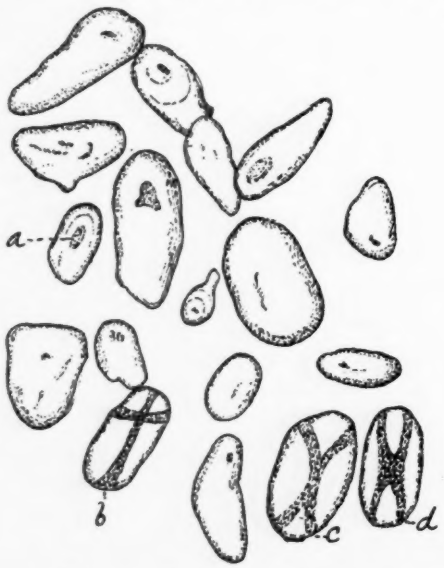


FIG. 14.—STARCH OF GERANIUM.

as viewed by polarized light; the rest are as they appear by ordinary light.

Valerians from several different sources were studied, German, English and Vermont valerian, as well as other specimens of unknown origin.

In all, the starch grains are spherical, ellipsoidal, somewhat angular, or more or less irregular, hilum central or subcentral, often slightly fissured or more transparent near the center, sometimes double or triple but much more commonly single; many of the single grains, however, show one or more flat fracture surfaces; concentric markings, few or none except on occasional quite large grains, where they are more numerous and distinct; polarization cross usually rectangular and equal-armed. An observed peculiarity of valerian is that some of the cells—usually lying near the inner part of the middle cortex—contain starch grains much larger and more distinctly marked than the other cells. Figs. 16, 17, 18 and 19, respectively, represent starches from English, Vermont and German valerians, and a valerian of unknown origin. The starches of Figs. 16, 17 and 19 are so nearly alike in all essential parts of their structure that they might well have all been derived from the same plant, but

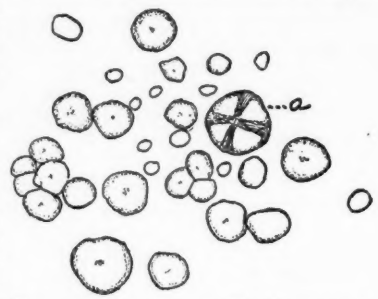


FIG. 15.—STARCH OF PODOPHYLLUM.

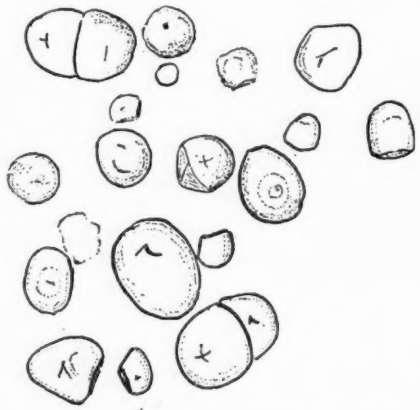


FIG. 16.—STARCH OF ENGLISH VALERIAN.

the grains of Fig. 18, German valerian, are observed to be conspicuously larger and proportionately more distinctly marked. But manifestly there are no other differences of importance; all clearly belong to the same type of structure.

Serpentaria starch, Fig. 20, consists of spherical, spheroidal, or somewhat angular, simple or compound grains, the simple ones, however, predominating. The hilum is distinct, but seldom fissured, central or nearly so, and in the larger grains surrounded by a few rather indistinct, concentric, or somewhat eccentric stratification lines. The polarization cross, as shown in *a*, usually rectangular and equal-armed.

In spigelia starch is not abundant, and the grains vary greatly in size and shape. Some are spherical, others ellipsoidal, others ovate, and still others angular and irregular. The hilum, however, is almost always central or subcentral, and its position is often marked by a small, straight, V-shaped or X-shaped fissure. Delicate concentric stratification circles are visible on some of the larger grains when viewed in good light. The cross of polarization is faint for grains so large, and has equal, though somewhat oblique, arms. This

is shown in Fig. 21. *a* and *b* are grains as viewed by polarized starch is light.

The starch of hydrastis, illustrated in Fig. 22, is very abundant in the rhizome. The grains are sometimes single and rounded, more commonly with one or more flat faces or aggregated in masses of from two to six or more grains. The hilum is central, usually inconspicuous and unfissured, and no stratification curves are observable. No distinct polarization cross is visible.

The starch of caulophyllum illustrated in Fig. 23, though very minute grained, is nevertheless quite characteristic, owing to the way the granules are aggregated. The isolated granules are globular, or much

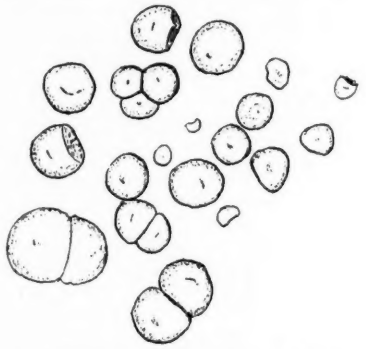


FIG. 17.—STARCH OF VERMONT VALERIAN

more commonly many-sided, and without evident hilum, or markings of any kind, but they are mostly aggregated in nearly globular masses of from twenty-five to fifty granules. The grains do not polarize.

Cimicifuga starch, shown in Fig. 24, is rather abundant in the rhizome, and consists of grains of moderate size, which are sometimes nearly round, but more commonly angular, or obtusely many-sided and single or aggregated in masses of from two to eight or ten grains. The hilum is central or subcentral, rarely with a small straight or angular fissure.

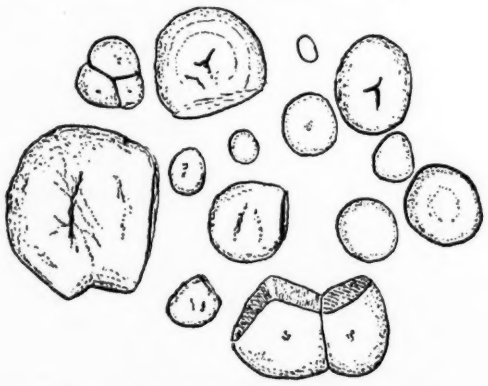


FIG. 18.—STARCH OF GERMAN VALERIAN.

No lines of stratification are observable, except very faintly on the largest grains, and then not more than one or two can be detected. Polarization cross nearly rectangular and equal-armed.

The starch of menispermum is neither very abundant nor very characteristic. It occurs chiefly in the outer portion of the pith, in the soft medullary rays, and in the middle bark. The grains, illustrated in Fig. 25, are globular, or with one or more flattish sides; most commonly single, but sometimes double or triple; hilum central, inconspicuous and unfissured. No stratification lines are observable, and no polarization cross.

The starch of leptandra occurs in moderate quantity in the rhizome and consists of isolated globular or angular grains mixed with those which are massed in groups of from two to twelve grains. The hilum is central or subcentral, and distinctly observable in the larger grains, seldom fissured, but often marked by a rather large, less refractive rounded or angular area near the center, as shown in *a* and *b*, Fig. 26. On the larger grains one or two stratification curves are faintly observable. Polarization cross nearly or quite rectangular and equal-armed. Freely

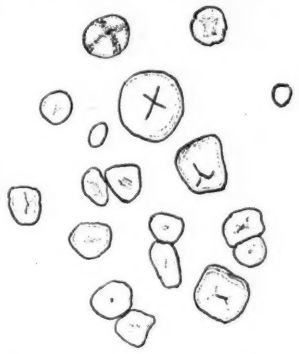


FIG. 19.—STARCH OF VALERIAN OF UNKNOWN SOURCE.

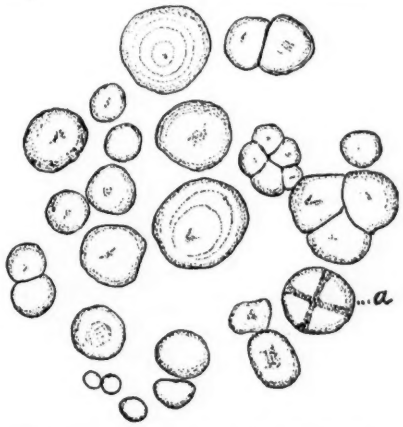


FIG 20.—STARCH OF SERPENTARIA.

sprinkled among the larger grains are minute, apparently structureless ones.

If the starch of this drug be compared with that of

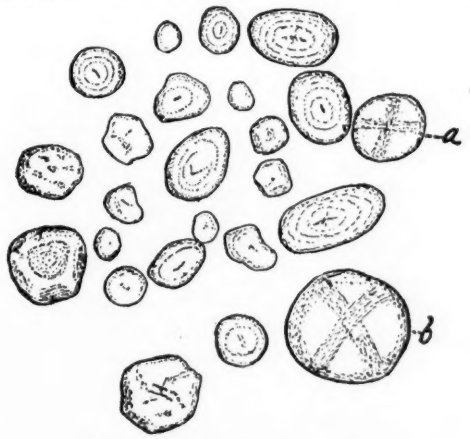


FIG. 21.—STARCH OF SPIGELIA.

cimicifuga, a great similarity will be observed. The grains of the latter, however, average somewhat larger than the former and the proportion of minute grains is not so great.

In jalap the starch is abundant, large-grained and quite characteristic. The grains are dense, rounded or broadly ovate, with the hilum somewhat eccentric; they are mostly single but sometimes double, in which case the two component granules are usually unequal; the hilum is sometimes though rarely slightly fissured, and in the larger grains is surrounded by a series of stratification curves. The polarization cross is nearly rectangular usually, but very unequal-armed in the ordinary position of the grains, as shown in *a* and *b*, Fig. 27.

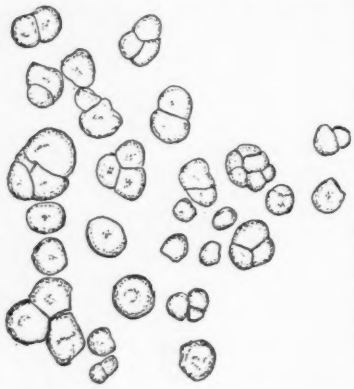


FIG. 22.—STARCH OF HYDRASTIS.

Aconite is very rich in rather large-grained starch, which is illustrated in Fig. 28. The single grains are round, oblong, or often with one or more flat faces, but compound grains are quite common and these range from double ones to those composed of eight or more granules. The hilum is central, sometimes faintly fissured in a radial manner, concentric markings indistinct or none and polarization cross nearly equal-armed and nearly rectangular in the simple grains.

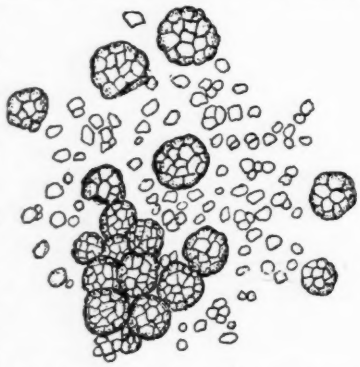


FIG. 23.—STARCH OF CAULOPHYLLUM.

A specimen of Chinese aconite, which was examined, showed grains of similar shape and size but with a less distinct polarization cross and with the stratification curves about the hilum much more distinct. The starch is illustrated in Fig. 29.

FIG. 24.—STARCH OF CIMICIFUGA.

The starch of aconitum ferox is also very similar to that of the official drug. Certainly it would be very difficult if not impossible to distinguish the two drugs by the starches alone. Fig. 30 illustrates this starch.

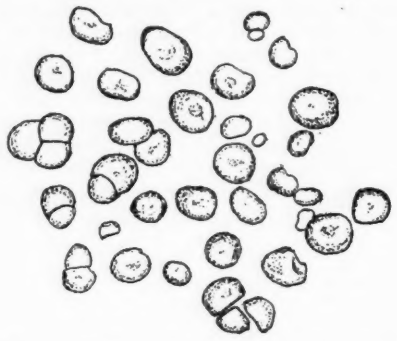


FIG. 25.—STARCH OF MENISPERMUM.

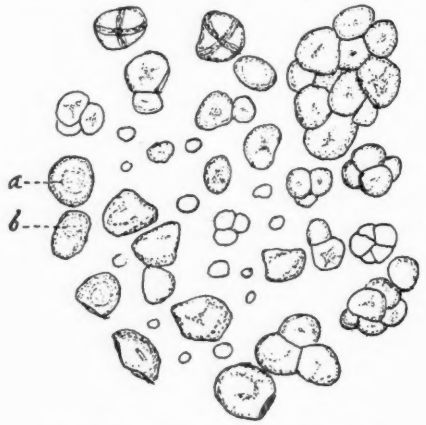


FIG. 26.—STARCH OF LEPTANDRA.

The corm of colchicum usually contains starch in great abundance and it is large grained and quite characteristic. Many grains are single and spherical,

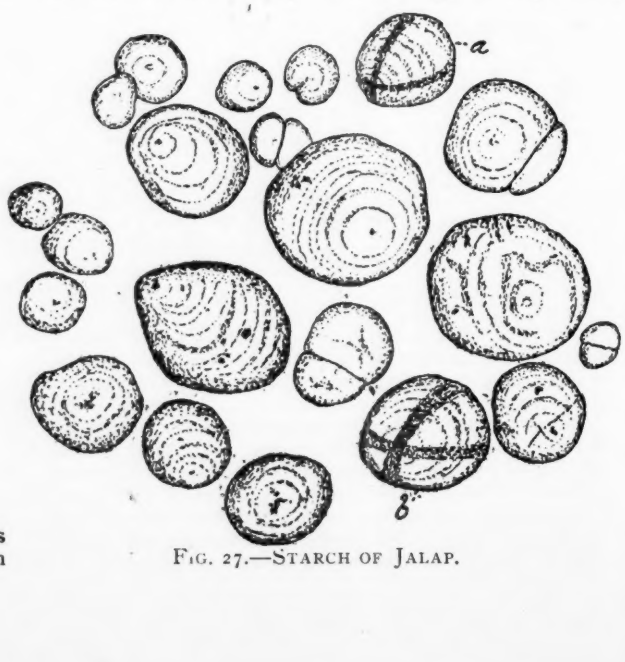


FIG. 27.—STARCH OF JALAP.

spheroidal or present one or two flattish faces; many are double, triple or quadruple, but all, even the smaller ones, are strongly, stellately fissured through the central hilum. The rays of the fissures are often very numerous. These fissurings are well shown in

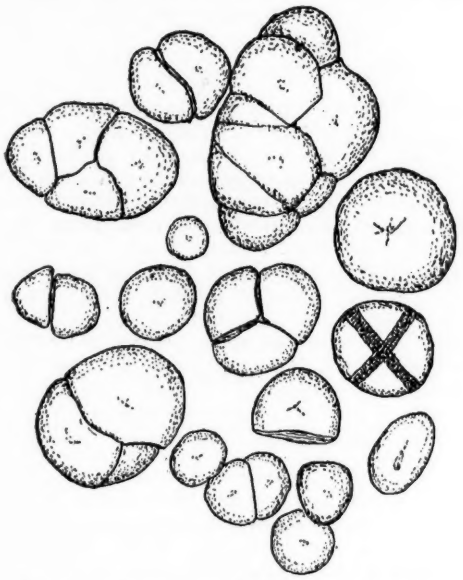


FIG. 28.—STARCH OF ACONITUM NAPELLUS.

the figure, Fig. 31. The polarization cross is rectangular and equal-armed, and the rays are broadest at the intersection of the arms, as shown in *a* in the drawing.

Peculiar Ferment in Mushrooms.—M. Bourquelot, in a recent communication to the French Academy of Sciences, has brought forward evidences of the presence of a ferment analogous to emulsine in mushrooms.

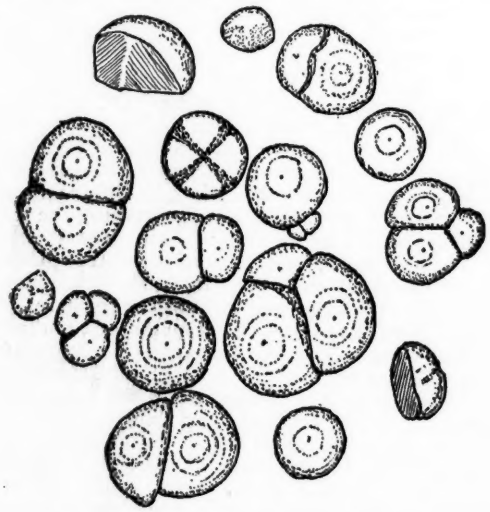


FIG. 29.—STARCH OF CHINESE ACONITE.

It is proved that several mushrooms, and especially those developing on living or dead wood, contain a soluble ferment possessing the property of doubling various glucosides, such as amygdaline, salicine, and coniferine. It is not possible to say that this ferment is identical with the emulsine of the almonds, but it acts in the same manner and upon the same substances. This ferment was found in two ways. In one, the fresh mushroom was placed in a saturated atmosphere of ether or chloroform vapor, which produces an abundant exudation of liquid holding in solution a large

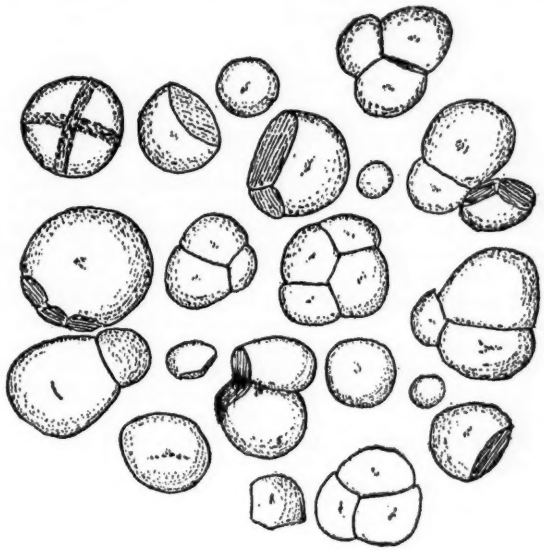


FIG. 30.—STARCH OF ACONITUM FEROX.

portion of the principles contained in the cellular juice. This liquid was placed for 24 or 48 hours in direct contact with a solution of a glucoside; or an aqueous solution was formed by precipitation with alcohol, and treated in the same manner. In the second process, the mushroom was triturated with sand and transformed into a paste; this paste was treated with distilled water and filtered off, the liquid being used as before. One specimen, picked from an elder branch,

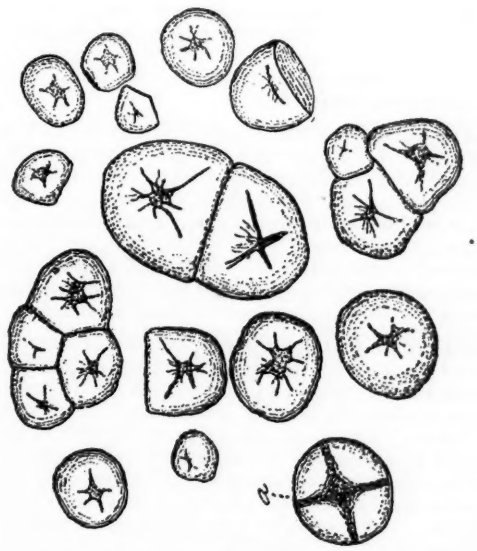


FIG. 31. —STARCH OF COLCHICUM.

gave a liquid which completely converted a dose of coniferine into grape-sugar in the course of three days. The ferment is limited to fungi living on wood, enabling them to assimilate the glucosides contained in it.

Medical Notes.

Pichi is well spoken of as a remedy in diseases of the urinary tract by Dr. M. Friedlander (*Therap. Monatsheft*).

Good results from Brown-Sequard's succus testicularis, have been observed in a number of cases of anæmia by Dr. D. L. Montané (*Ann. Acad. Ciencias Habana*), who administered it per os instead of subcutaneously.

Lanolin for Gonorrhœa in Women.—Asch (*Bull. Gen. de. Thérap.*, 62 anée, tome i. 22) treats gonorrhœa in women by uterine or vaginal injections of a lotion made up of equal parts of glycerin, lanolin and water. From two to five parts of this lotion are added to a hundred parts of water.

For Perspiring Feet.—The following is said to be useful for checking excessive sweating of the feet, and for removing the offensive odor caused thereby :

Sulph. precip.	gr. xxx
Powdered arrowroot	½ oz
Salicylic acid	gr. vij M

To be dusted over the feet and between the toes.

Intubation for Whooping Cough.—Dr. Julius Taub states (*Pest. Med. Chir. Pr.*, 11, 93) that he has obtained excellent results by resorting to intubation in severe case of whooping cough. The tube is allowed to remain in for from 3 to 5 hours at intervals of a day or so. Slight paroxysms are induced at the moment of insertion, but no more occur until some time after it has been removed.

To Minimize the Dangers of Cocaine.—M. Riclus says the dose should not exceed one-fifth of a grain for small operations and from one to three grains in large operations. The injections should always be made in the recumbent position and care should be taken not to push the liquid into a vein. M. Gautier maintains that by combining nitroglycerine with the injection all danger can be avoided.

Methylene Blue for Bright's Disease has been recommended by Netschajiff (*Deutsch Med. Woch.*) in doses of 0.1 gramme (1½ grains) in wafers three times daily. The urine generally shows a blue coloration within an hour and the albumen and cylindrical casts gradually disappear. He also believes that the character of the urine is a far altered by the administration of methylene blue that the micro-organisms of acute nephritis are deprived of their nutriment.

Ichthyol in Gynæcology.—Reinhold Herrman publishes (Inaugural Disertation at Gorlitz) the result of the use of ichthyol in 142 cases. In 22 of these the uterus itself or its mucous membrane was affected and 11 of these cases were cured, 9 were improved and three showed no result. The parts adjacent to the uterus were involved in the remaining 120 cases, and of these 59 cases were cured, 56 were improved and 5 were not affected. The resorbent and analgesic effect of the ichthyol was quite marked.

For Sea Sickness.—A correspondent of the *British Medical Journal* recommends the following :

Tinct. aurant. recent	℥ iv
Chloralamide	℥ ij
Potass. bromid	℥ ij
Aquæ chloroformi	℥ ij
Aq. destillat. q.s. ad. ft	℥ iij

The dose is one ounce. Where there is both much pain and irritability chocolate tablets of one-tenth or one-twentieth of a grain of cocaine should be eaten quickly at intervals of half an hour or an hour, ice water being sipped between whiles. Where there is pallor with tendency to collapse, chocolate tablets containing one two-hundredth of a grain of nitroglycerin may be given.

Treatment of Acute and Chronic Rheumatism.—For the last six years M. Ruel has treated acute or chronic rheumatism externally only. Compresses steeped in the following solution are applied twice a day to the articulation and covered with oil-silk so as to prevent evaporation :

Salicylic acid	℥ v
Diluted Alcohol	℥ iij
Castor oil	℥ vij
Chloroform	℥ iv

When the applications are properly made the salicylic acid appears in the urine twenty-four hours after.

Ichthyol Suppositories in Inflammation of the Prostate.—Dr. A. Freudenberg of Berlin reports (*Centralblatt of Klin. Med.*) the most marked success from the use of suppositories of ichthyol in prostatitis both in the chronic stage and in the latter part of the acute stage. They sometimes cause at first a little local irritation and a tendency to defecate which can usually be overcome by lying down for 15 to 20 minutes. It is advisable to begin with the smaller dose gradually increasing it. The author usually prescribes from 0.3, or 0.6 or 0.75 grammes (4½ or 9 or 11½ grains) of ammonium sulphichthyolate, to be thoroughly mixed with from 2 to 2.5 grammes (31 to 46 grains) of cacao butter and made into a suppository. One of these should be used in the morning and one in the evening. Hollow suppositories should not be used as they liberate the unmixed ichthyol, the effects of which are not always good.

Acute Phosphorus-Poisoning.—Dr. Münzer, reports (*Prager.Med. Wochenschr.*,1893,No. 32) the favorable issue of three severe cases of acute phosphorus-poisoning—all coming under treatment late, and in one there was already exhaustion, icterus, and hepatic tumefaction—in consequence of observing the following therapeutical indications :

1. To remove the phosphorus from the gastro-intestinal canal, by means of lavage of the stomach, and evacuation of the intestines with purgatives. The lavage is considered quite useless if more than twenty-four hours have elapsed since the ingestion of the poison ; still, a trial of it is recommended even then. The administration of cathartics, on the other hand, is always indicated, particularly in the first few days after the poisoning. The use of bitter waters or infusion of senna (10 grammes [2½ drs.] : 200 grammes [6½ fl. oz.] of water) is preferred ; while, naturally, oily purgatives—such as castor oil, etc.—are to be avoided

2. To render inert any particles of phosphorus that might have remained in the gastro-intestinal tract, for which purpose the author employs copper acetate, or copper sulphate, or—better still—*old*, oxidized turpentine oil.

3. To overcome the general acidity, which, while it appears merely as a symptom of the poisoning, may

provoke certain disturbances. It therefore seems quite rational to combat the same with large doses of sodium bi-carbonate, 10–20 grammes (2½–5 drs.) daily.

4. To administer highly nutritious food, rich in albumin, as soon as there is even the slightest tendency toward assimilation of nutriment.

MISCELLANEOUS FORMULAS.

SOLUBLE BLUE FOR LAUNDRY PURPOSES.

[*British and Colonial Druggist.*]

I. Chinese blue ..... 2 ozs.
Oxalic acid ..... 1 oz.
Boiling water ..... 1 quart

Dissolve the blue in the water and add the acid.

II. Sulphate of indigo ..... 2 ozs.
Water ..... 1 quart

ICHTHYOL IN PSORIASIS OF THE SCALP.

[*Clin. Journ.*]

Ichthyol ..... 2 parts
Salicylic acid ..... } of each 1 part
Pyrogallic acid ..... }
Vaseline ..... } " 20 parts
Soft soap ..... }

Apply daily to each patch. Should it provoke irritation, discontinue it.

MENTHOL IN ITCHING AFFECTIONS OF THE SKIN.

[Colombini, *La France Medicale.*]

I. Menthol ..... 5 to 10 grammes
Alcohol ..... 100 grammes

II. Menthol ..... 10 grammes
Oil of sweet almonds ..... 10 grammes

III. Oxide of zinc ..... 25 grammes
Starch-powder ..... 25 grammes
Vaseline ..... 50 grammes
Menthol ..... from 0.5 to 0.8 grammes

IV. Oxide of zinc ..... 10 grammes
Subnitrate of bismuth ..... 10 grammes
Menthol ..... 1 to 3 grammes
Starch-powder ..... 1 to 30 grammes

When the application is to mucous surfaces the mixture should be weakened somewhat in menthol, since otherwise there is a painful burning sensation.

DUSTING POWDER FOR CHILDREN.

[Dr. P. Vernon.]

Powdered burnt alum ..... 15 parts
Porphyrized boric acid ..... 35 "
Precipitated calcium carbonate ..... 150 "
Rice starch (or lycopodium) ..... 300 "
Carbolic acid (crystallized) ..... 3 "
Powdered camphor ..... 2 "
Menthol ..... 2 "
Eucalyptol ..... 2 "
Powdered zinc oleate ..... 2 "

FOR REMOVING WARTS.

[Dr. R. B. Morison, Am. Dermatological Society.]

Corrosive sublimate ..... gr. v
Salicylic acid ..... ʒ j
Collodion ..... ʒ j

Apply once a day, removing the old crust before each application. After four dressings the wart can generally be drawn out without pain, the wound being afterward dressed with simple ointment. The author has sometimes increased the quantity of corrosive sublimate to as much as 30 grains instead of five.

CHLORAL AND BROMIDES IN WHOOPING COUGH.

[Dujardin-Beaumetz—*Rev. Gén.*]

MIXTURE.

Syrup chloral ..... 25 parts
Sodium bromide ..... 2 "
Potassium bromide ..... } of each, 1 part
Ammonium bromide ..... }
Distilled water ..... 30 parts

Tea or tablespoonful—according to the child's age—morning and evening, with the yolk of an egg, in a glassful of warm, sweetened milk.

PATÉ DENTIFRICE AU MENTHOL.

[*Annali di Chimica e di Farmacologia.*]

Flowers of sulphur ..... 25 grammes (385 grs.)
Magnesia carbonate ..... 25 grammes (385 grs.)
Menthol ..... 1 gramme (15 grs.)
Cochineal ..... 50 centigrammes (7½ grs.)
Glycerina sufficient quantity.

HOT SODA SYRUPS.

CREAM CHOCOLATE.

Confectioner's chocolate ..... ½ pound
Hot water ..... 2 quarts
Condensed milk ..... 1 can
Granulated sugar ..... 5 pounds
Whites of two eggs.
Extract of vanilla ..... 1 ounce

Cut the chocolate finely into a porcelain lined evaporating dish and with the aid of heat and a pestle reduce it to a smooth paste. Add the water (boiling hot), stirring constantly, then stir in the condensed milk and sugar. Allow to cool, skim off the cacao butter, particles of chocolate, etc., add the white of egg, previously beaten to a froth, and the vanilla, and strain through muslin.

CHOCOLATE SYRUP.

[T. A. Hodgson.]

Van Houten's soluble cocoa ..... 3½ ounces
Boiling water ..... 2 pints
Granulated sugar ..... 40 ounces
Extract vanilla ..... 2 drachms

Dissolve the cocoa in the boiling water, then add the sugar; when that is dissolved, strain and add the vanilla.

HOT CHOCOLATE.

[L. F. Stevens.]

Chocolate ..... ½ pound
Granulated sugar ..... 3 ounces
Boiled water ..... sufficient to make 4 pints

Select a rich brand of chocolate. Baker's is convenient because it can be found everywhere, and you do not have to pay a fancy price for it. Grate or scrape fine and triturate with one ounce of the sugar (this may be done preliminary and in larger quantities if necessary); then in a large warmed mortar gradually form a paste under the pestle by gradual addition of boiling water up to 20 fluid ounces, transfer to a porcelain dish, slowly heat and stirring well gradually add the remaining two ounces of sugar and ten fluid ounces of boiling water, and bring the whole to the boiling point for five or six minutes, then remove and stir awhile until ebulition ceases and again heat, and boil for one minute, by this means the cacao butter will not separate and it will not need straining, only skimming, to remove any extraneous matters. The attention here is mainly to be devoted to getting a smooth paste at the first step, and not overheating at the last.

CHOCOLATE SYRUP.

[E. C. Marshall.—Prize Formula.]

1. Powdered chocolate ..... 4 ounces
2. Cornstarch ..... 4 drachms
3. Hot water ..... 2 pints
4. Sugar ..... 2½ pounds

Rub 1 and 2 with 6 ounces of cold water; then pour on 4, stir well and take weight, then boil until the starch is thoroughly cooked, and make up loss in weight, then add 4 and stir until dissolved; when cold add 1¼ fluid drachms of extract of vanilla. Draw in the same manner as coffee.

HOT COFFEE SYRUP.

I.

Coffee, freshly ground and roasted ..... 8 ounces
Sugar ..... 24 "
Best French brandy ..... 1 ounce
Boiling water ..... 16 ounces

Moisten the coffee with hot water and the brandy, pack firmly in a percolator, and pour on the boiling hot water, collect the first 16 ounces of the percolate and dissolve the sugar in the percolate.

II.

Coffee	1 pound
Glycerine	1. 2 ounces
Sugar	7 pounds
Water	q. s.

Mix the glycerin and 84 fluid ounces of water together and moisten the coffee with 8 ouncs of this mixture and let stand one-half hour. Then pack firmly in percolator and pour on the remainder of the liquid previously heated to nearly boiling temperature. When this has disappeared from the surface, pour on water until 1 gallon of infusion has been obtained. To this add the sugar and dissolve without heat.

III.

Pure Mocha coffee (ground fine)	4 ounces
Pure Java coffee (ground fine)	4 ounces
Granulated sugar	6 pounds
Hot water	q. s.

Percolate the coffee with hot water until the per colate measures seventy-two ounces. Dissolve the sugar in the percolate by agitation without heat and strain.

LEMON SYRUP.

Lemons	No. x.
Citric acid	1 fluid drachm
Simple syrup	1 gallon

Grate the peel from the lemons, bruise the peel with half its weight of sugar and add to one gallon of syrup. Let stand four hours in covered glass or porcelain vessel, strain and add the citric acid.

HOT LEMONADE.

Ess. lemon, U. S. P. (from fresh oil)	2 ounces
Soluble ext. orange peel (or comp. spt. orange N. F.)	½ ounce
Lime juice	1 ounce
Citric acid	½ ounce
Ess. nutmeg	3 drops
Soda syrup	sufficient to make 4 pints

This, largely diluted, draws well with carbonated water as "Soda Lemonade."

GINGER.

[F. W. Faber.]

Fluid ext. ginger	2½ ounces
Sugar	40 ounces
Water for	2½ pints

Take 10 ounces of the sugar and mix with the fluid extract of ginger; heat on water bath till alcohol is evaporated. Then mix with 20 ounces of water, shake till dissolved. Filter and add balance of water and sugar. Dissolve by agitation.

HOT TOM.

Fluid extract of gentian	ʒ iss
Caramel solution	ʒ vi
Soluble extract of ginger	ʒ ii
Soluble extract of capsicum	ʒ ii
Soluble extract of orange	ʒ ii
Sea foam syrup	ʒ ii
Simple syrup	oiCi
Tartaric acid	ʒ ii

MOCK TURTLE BROTH.

[L. F. Stevens.]

Liebig's, beef extract } Armour's "Vigoral" }	each 1 ounce
Barley, oatmeal or starch	½ ounce
Gelatin	¼ ounce
Tr. orange peel (bitter) U. S. P.	2 drachms
Tr. capsicum	18 minims
Lime juice	3 fluid drachms
Worcestershire sauce	3 fluid drachms
Salt	¼ ounce
Hot water to make	1 pint

Make a thin paste from the starch or other material. Swell the gelatin in cold water, dissolve the beef extract in hot water with the salt, add to the hot mixture the starch paste and softened gelatin and bring all to a boil; strain through a wire strainer; add the flavorings and hot water to finish.

Notes, Queries, and Answers.

Under this heading we shall, to the best of our ability, endeavor to answer such questions addressed to us as come within the scope of this journal, provided they are accompanied by the name and address of the writer. Unless special instructions to the contrary accompany the query, the initials of the correspondent will be quoted at the head of each answer.

When asking for the formula of an unusual, patented or proprietary compound, always accompany the query with any information you may already possess regarding the locality in which it is used, its uses, and reputed effect. When it can conveniently be done, send also a specimen of the label used on packages of the compound.

Medicated Troches. F. R. T., Conn.—The formulas given below are types of the usual cough lozenge; any suitable name may be adopted as fancy suggests, the titles here given being selected with reference to the ingredients composing the troche:

Ipecacuanha and squill troches:

Powdered sugar	14 lbs.
Powdered squill	2½ ounces
Powdered ipecacuanha	1 ounce
Tartaric acid	½ ounce
Thick gum.	
Rose flavoring.	

Rub the powders together until thoroughly mixed; add the rose flavoring and sufficient gum to make a stiff paste, then roll out to smooth sheets and cut into troches with a round cutter or mold, making them large enough to give twenty-four to the avoirdupois ounce.

Compound ipecac troches:

Powdered sugar	14 lbs.
Purified extract of licorice	1 lb.
Dover's powder	3 drachms
Thick gum.	
Brown coloring.	
Lemon flavoring.	

Make the above ingredients into a stiff paste as in the preceding formula. Roll this out in troches as thin as a 25 cent piece and cut into troches within an oval cutter. The paste should be of a pale brown tint.

Tolu troches:

Powdered sugar	28 lbs.
Tincture of tolu	3 ounces
Thick gum.	

Mix the ingredients into a stiff paste and beat out thoroughly. Roll out thin and cut into troches with an oval cutter, making twenty-eight to the ounce.

The thick gum, coloring and flavoring mentioned in the above recipes can be obtained through any confectioner.

The Sale of Alcohol.—H. H. B., Brooklyn, writes: "Kindly inform me as to whether alcohol or wood alcohol may be sold by a druggist for other purposes than drink without a liquor license."

Alcohol or alcoholic liquors may not be sold as such without a license. When part of a prescription, written by a physician, the case is different; no license is then required except the U. S. license. No license is required for the sale of wood alcohol.

The Ownership of Prescriptions.—H. H. B., of Brooklyn, also writes: "I had a dispute with a physician in regard to the ownership of prescriptions. I maintained that the original prescription is the property of the patient, while he contended that it belonged to the pharmacist. Will you kindly state your views on the subject, and inform me as to whether this question has ever been decided in the courts?"

The bulk of legal opinion seems to favor the assumption that the prescription is the property of the patient. This view of the matter has been taken by Judge Kinney, of Detroit, who expressed it as his opin-

ion that druggists could not regard prescriptions as their own property without changing the title in property; he therefore decided that the prescription is the property of the patient. The best course for druggists to pursue when met with a request for the return of a prescription is to give a copy of the document and retain the original.

Tracing Cloth. H. W. H., New York.—The sample you send is tracing cloth used by draftsmen for making permanent copies of plans, etc. It is usually prepared by varnishing a fine quality of linen with a solution of Canada balsam in turpentine, to which a few drops of castor oil have been added.

Another method often quoted is the following:

Boiled linseed oil	10 lbs.
Lead shavings	½ lb.
Zinc oxide	2½ lbs.
Venice turpentine	¼ lb.

Boil for several hours, then strain and dissolve in the strained composition 2½ pounds white gum copal. Remove from the fire, and when partly cold add oil of turpentine sufficient to bring consistence. Moisten the cloth thoroughly in benzole and give it a flowing coat of the varnish.

Modified Warburg's Tincture. L. B. P.—You will find a modified formula for Warburg's tincture in the *National Formulary*, under the title "Tincture Antiperiodica."

Conjurer's Wine Bottle.—H. C., Utica. The trick mentioned in the PHARMACEUTICAL RECORD of October 27 1892, about which you inquire, is performed as follows:

In a clear glass wine bottle or decanter nearly filled with water dissolve about 20 grains of ferrocyanide of potassium. Then range four empty wineglasses on a table. No. 1 is clean; No. 2 has been rinsed out with a solution of perchloride of iron; No. 3 with a solution of sulphate of zinc, leaving a few drops of the solution in each glass. When the solution is poured from the decanter into these glasses it will appear like water in No. 1, of a rich blue in No. 2, like sherry in No. 3, and like milk in No. 4.

Another experiment of this kind is conducted as follows:

Have a row of five wineglasses half filled with water. Dissolve a little salt in one; iodide of potassium in the next; chromate of potassium in the next; phosphate of sodium in the next, and common washing soda in the fifth. Then add a few drops of a strong solution of nitrate of silver to each glass. In the first a milky white will be produced, the second will be yellow, the third red, the fourth orange, and the fifth brown.

Registration in New York.—"T. N.," New York puts the following questions:

"Is a druggist holding a license by examination from the old New York City Board of Pharmacy (1871) entitled to registration by the State Board of Pharmacy? Why not amend the law compelling the State Board to register graduates of the New York College of Pharmacy? Is the examination of the State Board considered higher than that of our college?"

If the State Board of Pharmacy adheres to the strict letter of the law, it will refuse to register a licentiate of the City Board holding the certificate mentioned. To recognize a certificate of that kind, which, it will be observed, was issued prior to the enactment of the amendment to the State Pharmacy Act providing for the registration of licentiates of the county boards who had procured registration in the first instance, by examination, would make the law retroactive.

Regarding the relative grade of examinations as contrasted by the State Board of Pharmacy and the College of Pharmacy of the City of New York, the latter is, of course, a better test of the knowledge possessed by a student or applicant for registration than those of the former; but these considerations are not taken into account by those responsible for the present enactments. Our correspondent may obtain more extended information regarding the subject of his query by addressing a note to Ed. Dawson, Jr., Syracuse, N. Y., who is secretary of the State Board.

Toilet Creams.—F. T. C., Ohio, writes: "Please publish some good formulas for toilet creams in your next issue." We give below a few selections from our book of recipes:

Toilet Cream:

Benzoated lard	6 oz.
Oil of sweet almonds	1 oz.
Glycerin	1 oz.
Tincture of benzoin	1 oz.

Mix the first two and the last two separately; then blend together with a wooden paddle and perfume as desired.

Glycerin Cream:

Spermaceti	3 ozs.
White wax	1 oz.
Oil of sweet almonds	8 fl. ozs.
Borax	½ oz.
Glycerin	3 fl. ozs.
Orange flower water	1 fl. oz.
Oil of neroli	5 drops
Otto of rose	3 drops

Melt the wax, spermaceti, and oil of almonds together; dissolve the borax in the orange flower water and glycerin, previously mixed; pour the solution a little at a time, into the melted mixture, stirring the preparation without ceasing until all the solution has been fully incorporated, and a homogeneous product results; finally add the essential oils.

New Cold Cream:

Oil of sweet almonds	100 parts
White wax	100 parts
Spermaceti	20 parts
Glycerin	300 parts
Boric acid	12 parts
Warm filtered water	100 parts
Perfume to suit.	

Melt the wax and spermaceti, add the oil, separately dissolve the boric acid in the glycerin, heat and while warm add to the warm fatty solution, then add the warm filtered water at once and stir constantly until a smooth ointment is complete. Before it is too firmly set add a suitable perfume.

Ginger Ale Extract.—J. L. P., Texas. The following is accounted a good process for the production of a ginger ale extract:

Tincture of capsicum	1 oz.
Fluid extract of ginger	10 ozs.
Distilled water	15 ozs.
Pumice stone, in fine powder	1 oz.
Caramel	q. s.

The tincture and fluid extract are mixed with the water and set aside in a cool place for about 24 hours. The pumice stone is then well mixed with this, by rubbing it down with a little of the fluid at first and then adding to the whole. After a short time it is transferred to a filter and what passes through at first is replaced in the filter until the filtrate is perfectly bright; lastly add caramel sufficient to color.

Bleaching Wax.—A. N., New Jersey, asks for information regarding an ozone or peroxide of hydrogen process for bleaching wax. We are not aware that wax bleachers employ any direct ozone process in their operation. The method usually employed is as follows:

To the melted wax add powdered nitrate of soda in the proportion of 1 ounce of the latter to every pound of the former. Afterward add dilute sulphuric acid in the proportion of 20 ounces of dilute acid to every pound of wax, keeping the wax warm and stirring the while. Let it stand a short time and then fill up the jar with hot water and allow the whole to cool. The wax should then be white. Afterward wash with water.

Written for the American Druggist and Pharmaceutical Record.

TIPS ON ADVERTISING XII.

By Joseph Auld,
Burlington, Vt.

Without any doubt the best way to reach the purchasing public at the present time is by newspaper advertising. The newspaper is sought for, paid for and welcomed in every household, and is read by everyone. It is, therefore, the best and surest way of reaching the people.

Circulars and "dodgers," except in rare instances, are not profitable. They do not reach the people—

IN WET WEATHER

MANY PEOPLE catch cold. A little carelessness will make much trouble.

Don't be careless—don't get your feet wet; serious illness comes that way.

But if you do catch cold, get something at once to ward off the effects. Never neglect a cold.

Preservation of health is simple, it is only watching carefully for the small troubles.

Come to us for preventives against wet weather troubles.

A DIME NOW MAY SAVE A DOLLAR TO-MORROW.

Wm. Cairns,

Pharmacist,
ATCHISON, KAN.

Designed by Jos. Auld. The original was without this cut.

that is, they are not read by them; and if read do not carry the same weight and influence as do newspaper advertisements. Therefore the average circular is not a profitable investment. If a well-worded and attractively printed circular were sent out as a sealed letter this objection might not hold so strongly. If circulars are to be used I would send them as sealed letters or by the hands of a uniformed messenger boy.

If the town had newspapers I would use them to the exclusion of circulars. If it had no newspapers I would send out circulars as above.

To make a success of a retail drug business I would first of all look to my store. It should be bright, cheerful and tastefully arranged; the attendants should be quiet, discreet and gentlemanly. I would make it possible at all times for a modest lady or gentleman to come into my store and make such personal purchases as must be made at drug stores without being compelled to run the gauntlet of one or more idle observers either within or without the counter or back rooms. I would make it my business to see that my store secured the confidence of people. These things are primary, and without them advertising is useless.

THE NEW OF THE MOON

Is said to be a good time to cut hair. There will be a new moon to-night.

In all phases of the moon you need drugs and toilet articles.

Don't keep house without a medicine closet; we can equip it with all the necessary articles, as well as supply all standard medicinal preparations and drugs.

We give a great deal of care to the compounding of prescriptions from drugs of high quality.

H. B. HEFFLEY,

Drugs, Perfumes and Toilet Articles,
JOHNSTOWN, PA.

Designed by Jos. Auld. The original was without cut.

Then I would take up the advertising as follows:

From Printers' Ink.

For that
"After the Ball"
Feeling

come to us and we'll fix you up something at our soda fountain that will make you feel like a new man. You'll like it so much you'll want a bottle in the house all the time. It's a specialty of ours and we call it ———.

D. RUGS.

Beginning, say, in January, I would take advantage of the weather and print a series of opportune advertisements, advertising special goods. I would take advantage of the changes in the weather during the whole year to bring forward seasonable goods. During wet disagreeable weather I would use the advertisement on the preceeding page. I would introduce astrology and other superstitions.

I would take advantage of the prevalence of contagious diseases by special advertising. I would call attention to any and every common complaint which was prevalent, for which my stock would furnish a remedy. I would carry and advertise homœopathic remedies, taking up common complaints for which these remedies are specifics.

I would take up every article of the drug trade singly from time to time, and bring it to the attention of the public in an attractive way.

To advertise the prescription department I would add to every advertisement a few lines.

The Sky Grows Gray, The Thermometer Drops Lower.

Winter comes on apace, and with it comes the usual cracked lips, rough skin and chapped hands. Neglect of such conditions means in the course of a few days a change from a petty annoyance to a positive disfigurement. To save mending avoid breaking. Remove the first sign of annoyance by the use of Glycerin Jelly. Put up in convenient tubes, elegant to use, prompt in results. Free from stickiness or greasy feeling—15c.

A Magician's Wand.

No matter how mild the Winter there still may be more or less occasion for a throat spray. We show you a line from the plainest spray to the most comp'ete Steam Atomizer.

If your physician does not specify any particular make we'll help you decide on something reliable, from 60c. to $3.00.

Food Warmers. The acme of convenience. They save time, labor, patience, health. Milk or food can be quickly warmed at any time. We have the Food Warmers in half a dozen styles and sizes. From 50c. to $2.00.

Insomnia whether caused by nervousness or cold feet is decidedly unpleasant. A magician's wand to remove the latter cause can be had in the shape of a hot water b'g. From $1.25 to $2.00.

WM. HENRY DUNN,
Opp. Court House,
SALEM.
Prescription Druggist.

Prize circular composed by Ralph Gable, of Salem, N. J.

In this way I would keep up a constant talk with the public; every day, if there were a daily newspaper; every week, if a weekly; and thus create confidence in my store, by showing the public that I thoroughly knew my business, and was following it closely and faithfully.

Like a physician, a druggist needs to get the respect and confidence of the people, and without these his business can never be large. But if he shows every day in his talks with his customers that he understands his business, and is constantly at the helm, he will soon get confidence, customers and friends.

If placards were to be used, I would print them on oblong sheets or streamers for dead walls and cards for windows; not making posters, but small sized sheets, not to be viewed afar off, but to be read near by.

I would also adopt another plan, as follows: I would distribute about holiday time each year, a few handsome and valuable presents in the following way: On the first day of January, each year, I would place in a handsome case, in a conspicuous place in my store, say, $100 worth of fine toilet articles, handsome and rich, from a mere bottle of perfume to a silver toilet set. I would lock the case and place inside of it a card to read something as follows:

These are our annual souvenir articles which will be presented on January 1, 1894, to the lady customers of this store, in the order of amount purchased here during the year.

I would then provide a salesbook for each clerk, with check to put down the names of articles, amount, and name of each purchaser. Each check should be filed at once, and each day a book record made of each purchase.

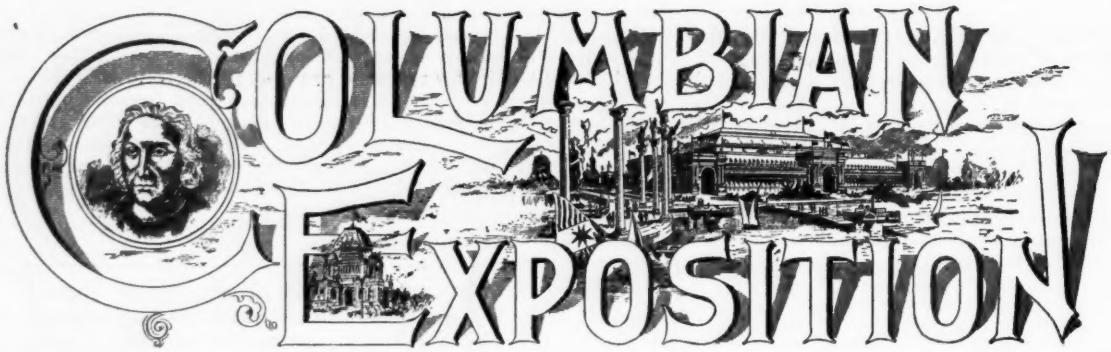
I would thus get the advantage of the competition and advertising for the whole year, and get it in an unobtrusive way that would be likely to enlist the competition of the best customers, when something more obtrusive and clearly self seeking and competitive would not do so. The use of cards and checks for the customer to present at each purchase is objectionable, and would not be used by the best people.

Feature Advertising.

A number of prominent advertisers have lately introduced regularly into their newspaper advertisements extraneous features which they thought would cause the public to seek for their announcement upon opening the paper. A Chicago dry goods house, for instance, have a regular space in several of the morning papers, and each morning, beneath the name of the firm which headed the advertisement, but before the description of goods, appeared, under the caption "What is going on to-day," a list of the various society events, association meetings, private entertainments and such occurrences as are not generally grouped together in a daily paper. A prominent soap manufacturing concern is attracting a great deal of attention by a series of bright cartoons on timely topics, mostly of a local character, in the advertising columns of the daily papers. The cartoons are accompanied by brief and witty descriptions which, of course, make mention of some of the merits of the firm's especial brands of soap before the end. Both of these methods have much to commend them.

In New York City a cutting druggist heads his advertisement with a small outline cut referring to some event of general interest occurring on that day, as the yacht race, a foot ball game, a political convention, etc.

Merchants in small towns and cities may find the following plan a good one, especially for use in weekly papers. Each week besides your regular display advertisement compose a bright conundrum, the answer to which shall refer to your business or the goods which you handle. Have the editor insert the query in his local notes, and state that the answer will be found in your regular advertisement in the same issue. The answer should appear in small type above the first line of the display "ad." If this is made a regular feature and the conundrums are sufficiently bright and witty, they cannot fail to make your advertisement sought after.



Manufactures Building.

(*Continued from page* 230.)

The exhibit of the Upjohn Pill & Granule Co., of Kalamazoo, Mich., consists of a mahogany case in hexagonal sections, twelve feet high, filled with friable pills and granules. In one compartment are shown 3,500,000 two-grain quinine pills, requiring 1,000 pounds of quinine sulphate for their production.

The J. C. Ayer Co., of Lowell, Mass., which is the only firm of proprietary medicine dealers having the privilege of exhibiting proprietaries at the Fair, have a particularly handsome exhibit of their "Ayer's Sarsaparilla," "Cherry Pectoral, etc.'

EXHIBIT OF FAIRCHILD BROS. & FOSTER.

Fairchild Bros. & Foster, of New York, have a handsome pavilion in white and gold, adorned with ornamental brass work. The exhibit proper contains the various ferments manufactured by this firm. Various preparations of these are displayed, such as peptonizing tubes, essence of pepsin, peptogenic milk powder, diastasic essence of pancreas, panopeptone, etc. These are shown in the packages in which they are placed on the market; many of them are also shown in the large globular and the tall narrow show jars.

The exhibit of the Horlick's Food Co., of Racine, Wis., is located in a little square booth of light oak, with entrances on two sides. On either side are displayed packages of different sizes of the two specialties of the firm—malted milk and infant food. On one side of the booth are suspended two hanging jars, filled with the same substances.

Mellin's Food is displayed in a small booth of ivory-white tint, open at one side only. On the rear wall is a handsome oil painting of a healthy infant, which is supposed to be indicative of the valuable qualities of the food.

OTHER EXHIBITS IN THE GALLERY.

A number of exhibits of interest to pharmacists are scattered along the west and north galleries.

In the Russian department, along the west gallery, are exhibits of surgical instruments, models of crystals, and some chemical and physical apparatus.

In the New South Wales department are exhibited a number of drugs, such as kava kava (piper methysticum), pennyroyal (mentha saturejoides), asthma herb (euphorbia pilulifera), twenty-one different specimens of kino, a number of specimens of wattle gum, Australian fever bark (alstonia constricta), and pituri (duboisia hopwoodii), the botanical name here given being the same as on the containers.

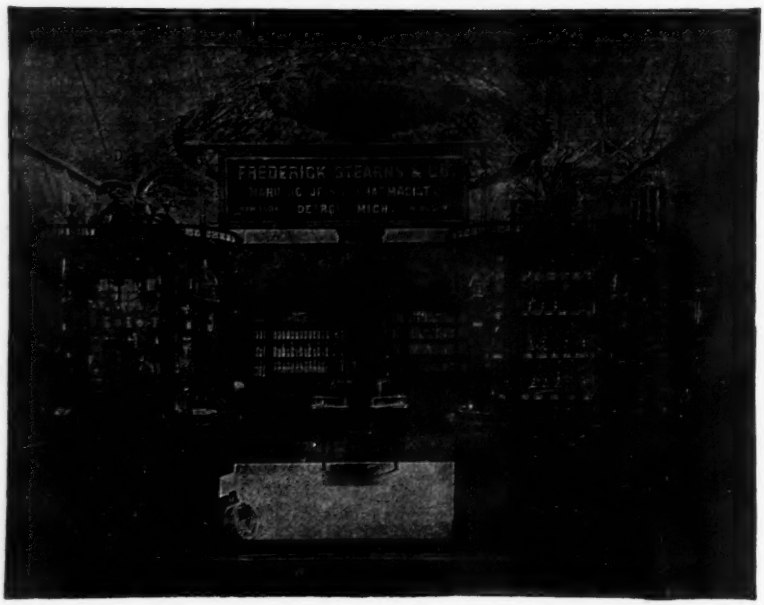


EXHIBIT OF FRED. STEARNS & CO. SEE PAGE 230.

The only exhibits in the British section of interest to pharmacists are the microscopical displays, three firms exhibiting: R. & J. Beck, F. Darton & Co., and W. Watson & Sons, all of London. All these exhibits are installed in tall ebony cases, and consist of various styles of microscopes—student and professional, accessories of all kinds, microtomes, turn-tables, lamps, etc. The most interesting of these exhibits is that of Watson, where the new, very serviceable, and complete Van Heurck stand is shown. The attendant at this exhibit thoroughly understands microscopes, and is always ready to impart information. In Beck's exhibit are shown objectives in the various stages of transformation from irregular pieces of glass.

In the Italian section are shown pharmaceutical preparations, chemicals, perfumes, soaps, etc., made by pharmacists in Bologne, Naples, Venice, and elsewhere.

In the Mexican section are shown 200 materia medica specimens in quart bottles, the names and properties being stated in Spanish.

In the German section is shown a large case containing 2,000 specimens of chemicals made by students in the laboratories of various universities and schools in Germany. Those who desire to see a very complete line of scientific apparatus including microscopes, spectroscopes, polariscopes, etc., will find one in the German section.

The Brazil exhibit includes many crude drugs, also pharmaceuticals such as compressed tablets, homœopathic remedies, etc., also books on medicine, sanitation, etc.

The only portion of the Austrian section worthy of interest is the exhibit of the microscopes of C. Reichert & Co., of Vienna, which firm has acquired considerable notoriety within the last year or two.

The case in which the products of the firm are shown is located at the rear of the pavilion and in it are shown impregnated gauzes and cottons, plasters of all kinds in rolls, and in the cut form in boxes, plaster of Paris bandages, ligatures, etc. The firm is using for many of its

goods a new style of container which is entirely impervious to air and its deteriorating constituents and which combines with this the advantage of extreme lightness.

The exhibit of Johnson & Johnson is installed in several tall ebonized cases filled with cottons, gauzes, plaster, etc. At the rear of the cases is a model of the room where surgical dressings are prepared. A copper-lined cupboard where the dressings are sterilized by heat is shown, also the glass tables on which they are rolled and cut, and the girl operatives at work; the room is lighted with tiny incandescent lamps. The manner of extracting blood, fat, etc., from ligatures previous to impregnation is shown in this exhibit.

Along the north galleries are located the exhibits of book publishers, antiseptic goods manufacturers, and the makers of surgical appliances and of microscopes and accessories.

The medical book publishers who are exhibiting are the W. T. Keener Co., of Chicago; Wm. Wood & Co., of New York; the J. B. Lippincott Co., of Philadelphia, and the F. A. Davis Co., of Philadelphia. Their exhibits contain a few works bearing directly upon pharmacy.

Among the manufacturers of antiseptic goods who are exhibiting are Seabury & Johnson, and Johnson & Johnson, of New York; the T. W. Heinemann Co., of Chicago, and the J. Elwood Lee Co., of Conshohocken, Pa. The handsomest is that of Seabury & Johnson (see page 261). It occupies a space of about fifteen by twenty feet and is surrounded by white railings of the Ionic order; the floor is covered with a handsome blue Wilton rug upon which is placed a smaller rug of white fur. In the front of the pavilion is a small case surmounted by a bronze figure of Mercury, and in the case itself are shown the various medals received by the firm.

The firms exhibiting microscopes and accessories are the Bausch & Lomb Optical Co., of Rochester, N. Y.; Queen & Co., of Philadelphia; the Gundlach Optical Co., of Rochester, and the McIntosh Battery & Optical Co., of Chicago. The Bausch & Lomb Optical Co. shows different styles of microscopes, various kinds of lenses and section of these, pieces of glass of all colors, prisms, etc. The exhibits of the other firms partake of the same general character. Queen & Co., in addition, show considerable chemical and physical apparatus and also a considerable line of chemicals.

In the northeast section of the gallery is the large exhibit of cash registers which will interest all men of business. The mechanical construction and the action of the self-adding register are here shown.

Department of Manufacturers.

UNITED STATES SECTION.

A number of exhibits of interest to pharmacists are located in this section. In the farther northeast corner, for instance, are the exhibits of the soda apparatus manufacturers, and include all the prominent firms of the country, viz., J. W. Tufts, of Boston; A. D. Puffer & Sons, of Boston; the John Matthews Apparatus Co., of New York; Chas. Lippincott & Co., of Philadelphia; Low's Art Tile Co., of Chelsea, Mass., and Otto Zwietusch, of Milwaukee.

EXHIBIT OF J. W. TUFTS.

J. W. Tufts has three fountains on exhibition, one of which was made expressly for the Exposition and occupies a prominent position facing the aisle. It is eight feet long and ten feet high and is provided with eleven draft tubes and 28 syrup jars. The body of the apparatus is constructed of Mexican onyx of greenish hue, some of the pieces being very large and quite translucent. Immediately above the draft tubes are two massive globes painted in transparent colors and are mounted on groups of cherubs; within the globes are incandescent lamps for illumination of the apparatus. The top is of wood finished in ivory and gold, is supported by three ornamental pillars, is provided with two large mirrors situated behind the globes, and above all is a balustrade containing a very fine eight-day clock. A second fountain is of American art tile with a top of German wicker work, while the third is constructed mostly of black Belgian marble relieved by Gryotte marble. A tumbler washer, a hot soda apparatus of art tile, and a silver

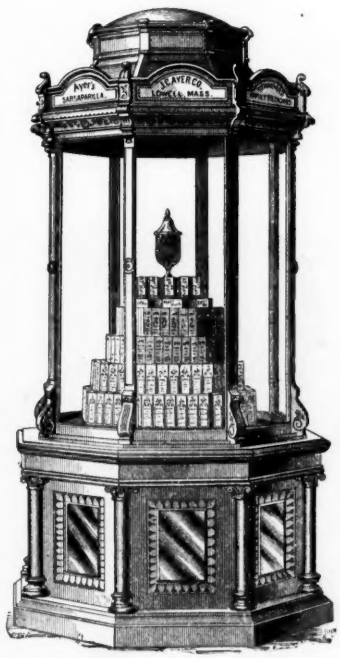


EXHIBIT OF J. C. AYER & CO.

urn for cracked or crushed ice are also shown.

EXHIBIT OF A. D. PUFFER & SONS.

A. D. Puffer & Sons are represented by seven apparatuses, two of onyx and five of fancy marble. Six of these are from the regular stock, while the seventh has been designed especially for the Exposition. It is constructed of Mexican onyx of a green tint relieved with marble, is eight feet long and ten feet high, and is provided with ten draft arms and 24 syrup jars. The top is supported by artistically-cut square columns of onyx, and has a number of mirrors all encased in select pieces of onyx. The apparatus is illuminated by five incandescent lamps, the central one of which is larger than the others, the whole being supported on a neat candelabra of gold. In addition to the regular soda apparatuses, the firm also shows counter stands for serving soda and mineral water.

EXHIBIT OF THE JOHN MATTHEWS APPARATUS CO.

The John Matthews Apparatus Co. is represented by three wall apparatuses. The principal one is made of Mexican and Californian onyxes, the former of a greenish tint, the latter mostly of a yellow; it is twelve feet long and ten feet high, and has twelve draft arms and 30 syrup jars. The top is of wood tinted in ivory and gold, and has three globes for illumination by electricity. The firm also has on exhibition a silver counter stand for soda; at the sides are recesses for the bottles of the syrup, and above all is a water fount (see page 263).

EXHIBIT OF CHAS. LIPPINCOTT & CO

Chas. Lippincott & Co. are represented by five apparatuses, the most important one being an immense apparatus with canopy, which faces the aisle. It is made of a combination of Mexican onyx and Gryotte and Sienna marbles, is twenty feet long and twelve feet high, and has twelve draft arms and thirty-two syrup jars. It is divided into two main bodies, with a grotto in the center, which has a mirror back of it. The top has a large plate-glass mirror extending the entire length of the apparatus, framed in onyx and black and blue marbles. The whole is supported by four columns of Mexican onyx. The canopy which surmounts the whole is made up of onyx and marble, and is supported by six onyx and marble columns resting on a Gryotte marble base. The whole is illuminated by thirty-four incandescent lights, disposed in little recesses in the marble, and covered with cut-glass crystals; in addition, a large incandescent lamp faces the front of the apparatus. Suspended from the canopy are two fans operated by an electric motor.

In addition to the regular apparatuses, there is a counter apparatus of silver, cylindrical in form, above which is a tumbler washer, and over the whole is a water fount.

LOW ART TILE EXHIBIT.

The exhibit of the Low Art Tile Co. differs essentially from that of the other firms inasmuch as but one apparatus is shown, and this is the largest one shown and is made almost entirely of art tile. The apparatus is twenty feet long and fourteen feet high and has thirteen draft arms and 48 syrup jars. The tile is of various tints and is ornamented with allegorical figures. Four white Corinthian pillars support the top and divide the body of the apparatus into three compartments. On top of each compartment are allegorical designs symbolizing thirst; on each pillar rests a large white sea shell. Before this apparatus is a long counter stand, the front of which is made of tile; at the end of this stand is a hot soda apparatus made entirely of tile.

(*To be continued,*)

Silurian Mineral Water.

The Silurian Mineral Spring Co., of Waukesha, Wis., have appointed Bell, Pollitz & Co., 2 Platt street, New York, agents for the well known Hungarian Aperient Water, the Hunyady Lajos and Imported French Vichy Reignier, as their eastern agents for the famous Silurian mineral waters, ginger ale and wild cherry phosphate. Descriptive circulars of the Silurian Waters can be obtained by directly a postal a postal card to the above address.

National Wholesale Druggist Association.

Nineteenth Annual Session, Detroit, 1893.

FIRST SESSION.

The first session of the nineteenth annual convention of the National Wholesale Druggists' Association was opened at the Cadillac Hotel, Detroit, on Monday October 9, 1893, by President Jas. E. Davis at 8 o'clock P.M., who introduced the Rev. Dr. Wellington W. Carson, who gave utterance to a short prayer invoking the Divine aid in the deliberations of the association. The Comptroller of the City of Detroit was then introduced, and in a few pleasant words bade the association welcome to the city on behalf of the Mayor and its citizens.

The reception of delegates from associations of retailers was proceeded with next, and J. H. Redsecker answered for the Pennsylvania State Pharmaceutical Association. He assured the N. W. D. A. that any action taken by that body with reference to the welfare of the retail druggists would meet with the hearty support of the association which he represented, and expressed the hope that the meeting would prove successful and be productive of good to the trade at large.

J. C. Eliel, of Minneapolis, was called upon to reply for the N. W. D. A., and in the course of an eloquent and carefully considered address told of the great pleasure which it always afforded the association to greet pharmacists upon the floor. He had been a retailer himself and, being familiar with his responsibilities, could speak with knowledge of the good which resulted to the entire wholesale drug trade of the country from efforts made toward the betterment of the retailer's position as a distributor to the public. The welfare of the retailer is the substructure upon which the wholesale druggist must erect the superstructure of his success. Therefore the time and labor expended in the interests of the retailer has its own fruit and is not entirely unselfish, because unless the foundation is strong and solid, we cannot build upon it and have that which we create endure.

The Interstate Retail Druggists' League was represented by Henry Canning, of Boston, Mass., who spoke in general terms of the willingness of the League to farther any work of the N. W. D. A. which might have for its object the more thorough organization of retail druggists in suppressing cutting.

M. Carey Peter of Louisville, responded to the invitation of the president in felicitous terms. "In Kentucky," he said, "the jobbers are on good standing with the retail pharmaceutical association, which is known as the Botanical Club, because they put mint into it."

William A. Hover then extended greetings of the Colorado State Pharmaceutical Association, and after a brief response by Benj. T. Fairchild, who referred to the dominant interests of the State which M. Hover represented, the meeting adjourned until the following morning.

SECOND SESSION.

The meeting was called to order at 10 A.M. on Tuesday. President Jas. E. Davis in the chair.

After sundry minor motions had been adjusted he proceeded to read his annual address. In this, which contained an interesting account of the discovery and foundation of Detroit, he made the interesting statement that more tonnage passes annually through the Detroit River than through the Suez Canal or New York Harbor. In recommending that future meetings of the association be held in June, between the 20th and 30th of the month, he brought forward many reasons which must have impressed the members as being sound and weighty. The chief of these was, however, the fact that the Spring rush of business is usually over and the trade can be more readily spared from places of business during that month than in almost any other month of the year. His further recommendation not to

PRESIDENT FRANK A. FAXON.

hold another meeting until June, 1895, unless it is deemed wise to call a meeting within a year was doubtless prompted by the present unsettled condition of trade and the limited period between now and June, 1894. Other recommendations of the president consisted of: An increase in the annual dues from $10 to $25; the appointment of a secretary to the Proprietary Committee; a change in the manner of electing the president of the association. Heretofore the president has appointed a committee of five, who name the officers of the association. This power, Mr. Davis thought, should be shifted to the shoulders of the association, and the election of president be made by secret ballot, and not by appointment. He suggested, and his suggestion was adopted, that the discussion on the report of the Proprietary Committee, and the report of the Retail Protective Committee be made in executive session, and same be kept strictly confidential, except such parts as are considered advisable to publish. The secretary to give out such sections as he shall deem proper. He commented in favorable terms on the recent accessions to membership in the association, and congratulated the Membership Committee on their good work in this direction. Referring to losses in membership from death, he mentioned the following names, which also receive mention in the report of the Committee on Memorials of Deceased Members, viz.: John S. Kirkland, of McKesson & Robbins, New York; Chas. E. Billings, of Billings, Clapp & Co., Boston; Alanson Sheley, of Williams, Davis, Brooks & Co., Detroit; Milton Myers, of Hostetter Co., Pittsburgh, Pa.; John Jacob Thomsen, of John J. Thomsen's Sons, Baltimore; Joseph Bennett, of Mellor & Rittenhouse, Philadelphia; James Richardson, of Richardson Drug Co., St. Louis; Dundas Dick, of Dundas Dick & Co., New York; Henry Spurlock, of Spurlock, Neal & Co., Nashville, Tenn.; John F. Henry, of John F. Henry & Co., New York; Oscar H. Bruen, of Bruen Bros. & Ritchey, New York; Theo. Gerhardy, of Chas. Baumbach Co., Milwaukee.

The president's address was on motion referred to a committee of five appointed by the Chair.

A letter was then read from J. Clifford Richardson, of St. Louis, in which he expressed thanks as a representative of the Richardson family, for the kind expression of sympathy which the association had passed on the occasion of the death of his father, James Richardson, who was the first president of the association. Peter Van Schaack thereupon submitted a preamble and resolution, in which the career of the deceased member was described, and the sorrow of the association at his loss testified to. The preamble and resolution were adopted by a rising vote.

A. B. Merriam, secretary, then presented his annual report a history of the transactions of the association during the interval which elapses between meetings that is always marked by evidences of careful preparation and a thorough regard for the interests of the association which he has served so long and with so much honor. The membership was stated as 427, classified as follows: active, 300; associate, 127. This does not include the honorary list of six, which is now reduced to four by the death of James Richardson and of Gen. J. H. Baxter. In a most exhaustive review of the action taken by the association with respect to the maintenance of prices on proprietary medicines, M. Merriam closed with the following eminently judicial statement of the situation as it is to-day:

The relation of the jobber to the retailer has been so often referred to in the discussions of this body, that it is not necessary to refer to it at any length here. Every plan which has been adopted and proposed to the manufacturer, has proved the mutuality of interest. While other members representing prominent committees have their experience and convictions, I can say for myself, from extended correspondence, that I believe the danger line regarding the safety of the rebate plan is not far removed,

unless the persistent demands made upon the proprietors for changes in business methods and plans, is abated. I have shown you in another portion of my report that it was a continuous labor of years to secure what was finally achieved, resulting to the advantage of both jobber and retailer. The representative cutter is no longer the humble apothecary, but he is intrenched behind large capital, business ability, and piratical tendency to absorption. To meet his demands, he must find his purveyors as unscrupulous as himself, and the supply is equal to the demand in every quarter. In addition to the $1,000 advanced by the association in aid of the "Campion" plan, in 1884, there has since been expended by the proprietary committee. . . . and all this largely, in the extension of plans proposed in the interest of the retail trade. Yet, with all this expenditure of money, and the vast amount of labor thrown upon the several committees, the result of these years are before you, and what does it show?

The political philosopher would suggest that the "condition" is still here to "confront us," the "*theories*" have proven wil o'wisps to disappoint and mislead. A modern writer has truly said, "commercial veracity is not only a great virtue but it is a politic virtue. The sapper of commercial morals is the man who promises that which he does not fulfill and who helps more than another to destroy the great principle of commercial veracity, which pure and unstained, is the salt of the world of commerce." Until this vital principle of business honor and honesty is thoroughly established in the relations of every member of this Association towards each other, and their obligations to all, it will be as impossible to stop this cutting evil as the flow of the Mississippi.

When we can inject absolute virtue into the veins of every unprincipled jobber and manufacturer and compel the retailers to do a hundredth part of what their representatives in conventions say the 30,000 will do, then we may have a possible hope that something may result to their advantage and our own. I ask your indulgence for the length of this report and for the sentiments spoken I assume individual responsibility.

The report of the treasurer was then presented and referred to an auditing committee.

A. Cressy Morrison, of Milwaukee Wis., who was chairman of the committee on fraternal relations, was next heard from. In originality of scope and breadth of view this report stood out prominently among the different reports presented. He showed evidences of his familiarity with the teachings of Darwin and Lamarck. Mr. Morrison's views with reference to the "basal motives which prompt nineteenth century business organizations," must have come with a feeling of surprise to many of the hard-headed men of business who listened to their enunciation. He told them that:

With the beginning of life in its earliest protoplasmic form, we first discover a tendency to co-operation, in the aggregation of animal forces, which, if from no higher motive than to prey upon each other, are forced into proximity. Slightly above this in the scale of development comes those motives of selfishness and self-protection, which, by some tacit, though perhaps unconscious, agreement, brings fishes into schools, birds into flocks; and, again, the preservation of the race in lower organism makes proximity, hence combination, necessary. Above this comes an animal development of co-operative effort, born of cumulative strength, which undertakes enterprises of acquirement, or war upon other races. For instance, the pack of wolves, who, under an acknowledged leadership, go forth in organized forces in search of food.

In all animal life selfishness and self-preservation are the fundamental reasons for organized co-operative effort. Fraternity is therefore born the weakling of uncontrolled and mere animal, unthinking instinct. The development of species draws into sharply defined lines the limitations of this animal brotherhood, and yet we find creatures of similar species and approximate developments battling with each other, as among ants, where we find all the horrors of civil war.

With the first spark of spirituality and that God-given touch of sublime intelligence, memory, comes gratitude and forethought; and in the early savage races, while the animal qualities still predominate, organization, first in the family—that cradle of fraternity; next in the village, where family fraternity is amalgamated; next in the tribe, where organization first becomes distinctly manifest, and again in the nation, where the ideas of equality, equal rights, patriotism, bravery, chivalry and loyalty are developed, fraternity, I repeat, comes forth in ever increasing prominence. This eternal and ever-present, never-failing necessary brotherhood of man has prophesied from the earliest beginnings the civilization which we now enjoy.

* * * * *

Beginning with the organization of physicians whose object is the dissemination of knowledge regarding clinical requirements and improved pharmaceuticals and the demand of scientific accuracy and purity both in the drugs and in the prescription when compounded; rising through them to the pharmacist himself, who, realizing the more exacting demand which the brotherhood of physicians is bringing about, organizes for the more thorough and practical fulfillment of the physicians' demands and the interchange of ideas which makes universal all improvements in methods of production and dispensation of drugs. The increased demand for exactness, perfection and elegance which is created by the pharmacist sets into active operation the inventive genius of chemistry and its attendant sciences, and forces the manufacturer to the highest attainment. Between the manufacturer and the retail druggist and sponsor to both exercising almost unlimited power in both directions, stands the wholesale druggist. With him lies in a large measure the responsibility for the purity in drugs, and thus in his hands rests the life or death of the sufferer for whom the physician is prescribing. The magnitude of his duties makes possible the closest attention to details, which would, in the hands of a retail druggist, be neglected, and the necessities of trade make him the check upon the manufacturer. Occupying so high a position and one which so closely affects the life of the nation, the wholesale druggist is fully alive to his responsibilities.

This report was referred to the Board of Control, after which Thomas Lord, of Chicago, presented a lengthy series of Memorials on Deceased Members.

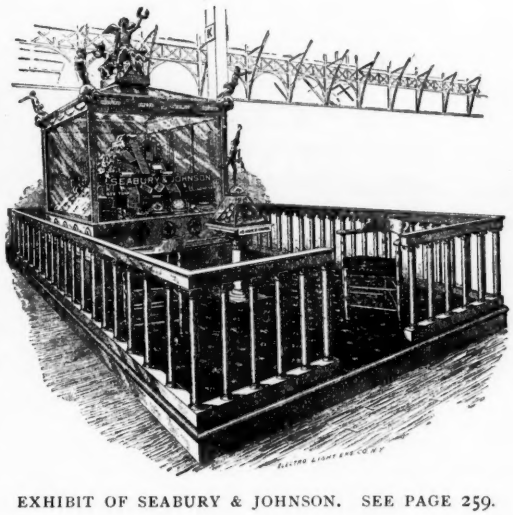


EXHIBIT OF SEABURY & JOHNSON. SEE PAGE 259.

The next committee to report being that on Proprietary Medicines, it was resolved to make it the first order of business for the afternoon session. The meeting then adjourned until 2 30 P.M.

THIRD SESSION.

The first business brought before the meeting at this session, which was held on Tuesday at 2.30 P.M., was the report of the Committee on Proprietary Goods, presented by its chairman, M. N. Kline. The causes which led to the failure of the different plans heretofore devised for the protection of retailers and the general control of supplies were fully outlined.

THE DETROIT PLAN.

Referring to the so-called "Detroit Plan" he reviewed its history, and said that early in the present year it became so plainly evident to the members of the committee that some steps would have to be taken to check the disintegrating process, that a meeting was decided upon, and this was held this year in Detroit on May 24 and 25. This meeting was attended by the president of the association and fourteen members of the committee, also by delegates from the Southern and Western Wholesale Druggists' Association. After a very full discussion, in which all the members present participated, it was voted as the almost unanimous sense of the committee that the following plan, which has since been known as the "Detroit Plan," should be recommended to proprietors as most likely to correct existing abuses.

Whereas, All plans to prevent the cutters from obtaining their supplies have thus far been unsuccessful.

Whereas, In our opinion all such plans will be unsuccessful as long as there are retailers who can buy direct from the manufacturer, and who may supply the cutter;

Whereas, It is manifestly to the retailer's interest to be placed on precisely the same footing in his purchases as the cutter, and as this can only be secured by insisting upon uniform cost to all classes of retailers;

Resolved, That we recommend the following plan to the manufacturer, and urge its adoption:

The manufacturer to sell at a discount only to those doing a strictly jobbing trade; the said jobbers to be defined by a committee appointed by the different local organizations of wholesale druggists, who will furnish lists of those who may properly be considered jobbers in their territory to the Proprietary Committee of the N. W. D. A., who shall furnish a complete list for the U. S. to the proprietors and wholesale dealers. We recommend an intermediate quantity for the retailers, not exceeding $25, to be sold at a discount not larger than 3 per cent.; the jobbers not to sell to anyone not in the list of jobbers at better than 3 per cent To anyone in the list of jobbers any jobber may sell at the manufacturers intermediate quantity price.

The closing paragraphs of the committee's report dealt with the financial difficulties in the way of successfully coping with the cutter or of cutting off his base of supplies.

THE REBATE SYSTEM.

With reference to the much discussed "rebate system" the committee presented the following conclusions:

In conclusion, we deem it useless to advance any arguments in favor of the rebate system. These were necessary at the time of its introduction ten or more years ago, but the justice of the demand by the wholesale distributor for a fair remuneration provided by this system, then conceded by the manufacturers, has never since been questioned, but on the contrary has constantly brought to its support a rapidly increasing number of advocates, the latest and probably the most notable being the Publishing Committee of the recently revised U S. Pharmacopœia. This being so, it is manifestly our duty to concentrate our efforts upon devising improved methods for its stricter enforcement, a more loyal support by our members of its conditions and a more active and united determination to defeat the dishonorable machinations of its comparatively few open enemies. This duty plainly lies along the lines indicated in the "Detroit plan."

The report of the Committee on Legislation was then taken up. The report was read by the Chairman, Benj. T. Fairchild. In it reference was made to the successful opposition inaugurated by the N. W. D. A. against the passage of the Paddock Bill. Other proposed measures opposed by the association and mentioned in Mr. Fairchild's report were: the Scott Bill providing for an increase of the Internal Revenue Tax on Alcohol; the Anti-option Bill and the different bills introduced in the legislatures of New York, Pennsylvania and Illinois all looking to the regulation of the sale and manufacture of patent medicines. The provisions of the substitute proposed for the "Hall Trade Mark Bill" were given in detail and recommended for the support of the association.

The Sherman Act received attention in the following resolution, which was adopted by a unanimous vote:

Resolved, The National Wholesale Druggists' Association of the United States, in convention now assembled, do respectfully petition the Senate of the United States to immediately repeal the purchase

clause of the Sherman Act, believing that this action is essential to the financial prosperity of this country, and believing that such action should be antecedent to further discussion of future financial measures.

After the transaction of routine business, and the reading of other committee reports, the meeting adjourned to Wednesday, at 10 A.M.

FOURTH SESSION.

The American Pharmaceutical Association was represented at this session by W. Bodemann, of Chicago, who introduced himself as follows:

"Mr. President and Gentlemen: When Jim Corbett and John L Sullivan met, before they started the fight, they had a shake. I extend to you all the hearty shake of the A. P. A., and when time is called we shall have a hearty shake again. I am very pleased to meet you."

The Board of Control here presented their report on the president's address. The complete report reads as follows:

In order to enable the association to do more effective work and to provide for the expenses attendant upon the employment of a competent assistant to the Committee on Proprietary Articles, your committee approve of the president's suggestion to increase the annual dues paid by the members from $10 to $25 per year, and that Article 9 of the Constitution governing the same be changed to conform to this amount so as to read:

"Twenty-five" in place of "ten" in lines six and seven.

We recommend the adoption of the suggestion to employ a secretary to Proprietary Committee, at a fair salary, and are of the opinion that the employment and direction of such assistant should be in charge of the Committee on Proprietary Articles

We recommend that the consideration of the change of method of election of officers of the association be postponed for the present.

We concur in the recommendation that the discussion on the report of the Proprietary Committee and report of Retail Protection Association be made in executive session, and same to be kept strictly confidential except such parts as are considered desirable to publish. The Secretary shall furnish for publication only such matters as may be directed by the chairman of the Proprietary Committee.

It is the opinion of your committee that no good reason has been advanced for changing the date of meeting from the month of September to the month of June, and suggest that the time of meeting remain unchanged, particularly as it is a fact that the time of calling the meeting is practically in the hands of the Preaident and Board of Control.

We concur in the president's recommendation in regard to amendment of Article 12 of our Constitution.

Signed by the committee,

JOHN S. MOFFITT,
JOHN N. CAREY,
M. C. PETER.

The committee appointed to submit nominations for officers for the ensuing year then presented their report as follows:

President.—Frank A. Faxon, Kansas City.

First Vice-President.—J. C. Eliel, Minneapolis.

Second Vice-President.—Thomas F. Main, New York.

Third Vice-President.—John B. Purcell, Richmond.

Fourth Vice-President.—John A. Carey, Indianapolis.

Fifth Vice-President.—E. C. Frisbie, Hartford.

Secretary.—A. B. Merriam, Minneapolis.

Treasurer.—S. M. Strong, Cleveland.

Board of Control.—C. F. Weller, Omaha; J. A. Gillman, Boston; J. S. Moffitt, St. Louis; A. S. Brooks, Detroit; B. T. Fairchild, New York.

The Board of Control at this point reported back through Mr. Peters on the suggestions contained in the report of the Committee on Proprietary Preparations. The majority of the suggestions or recommendations made were approved of, and the committee strengthened by other resolutions providing for the better conduct of business between wholesale and retail dealers. The report of the joint committee of the N. W. D. A. and A. M. W. D. P. A. was next presented by R. V. Pierce. The full text of the report enbodying the resolutions of the committee is appended herewith:

REPORT OF JOINT COMMITTEE.

Report of the special committee appointed to confer with the committee of the A. M. W. D. P. A. on the "Detroit plan."

To the Association of Manufacturers and Wholesale Dealers in Proprietary Articles:

Gentlemen: Your committee beg leave to report the following resolutions as agreed upon by the joint committee and already indorsed by the N. W. D. A.

Resolved, First, that the contract plan is the only practical method for the maintenance of fair and legitimate schedules for prices of proprietary articles.

Second.—That in order to strengthen and render this plan more effective, it is respectfully recommended that proprietors accept orders for full quantities, with rebate discount only from regular houses recognized as belonging to the number who will faithfully observe the prices and conditions established by the manufacturers.

Third.—That in the opinion of the joint committee the forms for price lists herewith submitted, embody in the main, features which would tend to give stability to the plan, and they are commended to the favorable consideration of proprietors. The committee consider it desirable that as far as practicable proprietors generally, adopt uniform or similar forms of price lists.

Fourth.—We recommend that proprietors be requested to furnish to the chairman of the Committee on Proprietary Articles of the National Wholesale Druggists' Association, and the Committee on Trade Interests of the association of manufacturers and wholesale dealers in proprietary articles, full lists of their customers with the understanding that in case where it is proven that contracts have been violated they shall be refused further supplies Also that in case of receiving orders from others their names shall be submitted to the chairmen of same committees for approval before filling them.

The chairman explained that the foregoing embodied the resolutions. The forms for price lists or instructions to wholesale agents, if they may be so called, and the blank form for acceptance of the agency tendered are as follows:

Office of.....(date).....

"Gentlemen—We have this day established a selling price for our preparations, as per inclosed price list.

"We shall be pleased to have you act as our selling agents and will make shipments on conditions and terms as below stated.

"On receipt of your acceptance of our selling agency for which we herewith inclose blank form for your signature, we will forward you such quantities as you may desire, in lots of not less than $.....

"In consideration of your maintaining our selling prices and complying with all the regulations herein mentioned, we will allow you a commission of..per cent. on our selling prices, provided that the net amount is remitted to us within..days from date of each invoice. We wil also allow you. per cent. for each off net amount if remitted in..days from date of shipment.

"We will prepay freight to your railroad depot or wharf, but goods are at your risk after delivery to transportation company. You are not to sell at less than our list prices, but may if you desire, allow your customers not over. .per cent. for cash in. .days from date of shipment.

"Our prices shall not be cut by you or your salesmen or agents directly or indirectly. When we can prove that you have wilfully cut our prices we will withdraw our selling agency and notify all other selling agents that no sales shall be made to you except at long prices. We sell only through our selling agents.

"We desire to have retail dealers fully protected in obtaining the regular prices, and all selling agents will refuse to supply all recognized and voluntary cutters of prices of any proprietary articles, whether wholesale or retail dealers.

"Furthermore, whenever the retail trade of any city, town or county have organized a league or association, embracing 80 per cent. of such dealers located in such city, town or county and have established a schedule at which proprietary articlse shall be sold by its members, and such facts shall be reported to you, either by such organization or by the undersigned, then you shall not supply our goods to any dealer in such city, town or county who sells proprietary articles in violation of such schedule so established, except at full retail prices.

"We have endeavored to make a plan just and equitable to all regular houses recognized as belonging to the number who will faithfully observe our terms, and will give no other discounts or terms than herein stated, no matter how large the quantity, and assure you that we will adhere strictly to these regulations and require like observance by all our selling agents.

"We believe our efforts in the interest of both jobbers and retailers will be appreciated, and will receive their cordial approval.

"Please let us hear from you promptly. Very respectfully yours,

"_____"

The proposed price list, the chairman added, is very brief, and simply gives the price of these articles:

PRICE LIST.

[John Smith & Co., Lowell, Mass.]

November 1, 1893.

Smith's Sarsaparilla, per doz.....	$3 00
Smith's Cough Syrup, per doz.....	3 50
Smith's Pills, per doz.....	1 75

10 per cent. advance on sales of less than ¼ dozen.

EXHIBIT OF J. ELWOOD LEE & CO. SEE PAGE 259.

In $—— lots of one article or assorted as wanted, a discount of 3 per cent. allowed.

We have selling agents in all important towns, who will supply our preparations at above prices.

No goods furnished by us except to our selling agents. JOHN SMITH & CO.

The amount in the other contract which was considered was named at one hundred dollar lots; it seems to be blank here. The chairman (reading from the price list) "We have selling agents in all important towns who will supply our preparations at above prices."

No goods furnished by us except to our selling agents.

(Signed) ————————

The form of acceptance is as follows:

————————

————————, 1895.

Messrs. ————————

————————

Dear Sir: We hereby accept the selling agency for your preparations on the conditions stated in your circular of November 1, 1893, and pledge you our faith and honor to strictly maintain your selling prices, and faithfully conform to all your conditions.

Yours truly,

————————

On motion, duly made and seconded, it was resolved to adopt the report as presented.

The election of officers was next in order, and on motion of Mr. Kline the secretary was asked to cast an affirmative ballot for the officers reported by the Nominating Committee. This was done, and the officers declared duly elected as nominated.

FIFTH SESSION.

The meeting was called to order on the morning of Thursday, October 12, at 10 A.M., and the first thing taken up was the report of the Committee on Location.

In the absence of the chairman, Mr. Hubbard stated that the committee had had several meetings and were in favor of New York City. A minority report was presented by Mr. Hoover, of Denver, who read a telegram received on the previous evening from the president of the Denver Chamber of Commerce, in which a cordial invitation was extended to the association to hold their next convention in Denver.

Mr. Kline moved that both reports be laid over under the rules, to be taken up at the proper time.

The president then suggested that the matter of new members should be taken up. He understood that S. M. Burroughs, of London, England, was desirous of joining the association; his name had not been posted the necessary length of time, however, and he was undecided as to what action to take in the premises.

The difficulty was solved by Mr. Moffitt, who moved that the name of Burroughs, Wellcome & Company be added by unanimous consent to the list of associate members. This was afterward amended by Mr. Moffitt to read "Active Members," and the motion was carried.

The secretary here read the list of names for membership.

ACTIVE MEMBERS.

B. O. Wilson, (G. C.), Boston, Mass.
Hass, Baruch & Co., Los Angeles, Cal.
Sagar Drug Co., Duluth, Minn.
Cawthon & Colman, Selma, Ala.
J. L. Hopkins & Co., New York.
Caldwell Sweet, Bangor, Me.
F. S. Calhoun & Co., New Haven, Conn.
Lapp Drug Co., Philadelphia, Pa.
Burlington Drug Co., Burlington, Vt.
Hartz, Bahnsen & Co., Rock Island, Ill.
C. D. Smith Drug Co., St. Joseph, Mo.
Evans-Gallagher Drug Co., Kansas City, Mo.
Nelson, Baker & Co, Detroit, Mich.
Hugues, Gueretz, Grasse, France, by E. Marchi, New York.
George E. Taylor, Leadville, Col.
Alfred H. Williams & Co., Utica, N. Y.
The Payne Drug Co., Rochester, N. Y.
E. H. Davis & Co., Rochester, N. Y.
W. Cushing & Co., Foxcroft, Me.
Cheney Medicine Co., Toledo, Ohio.
Farrand, Williams & Clark, Detroit, Mich.
H. D. Cushman, Three Rivers, Mich.
Edward Hills, Son & Co., New York.
Emerson Drug Co, Baltimore, Md.

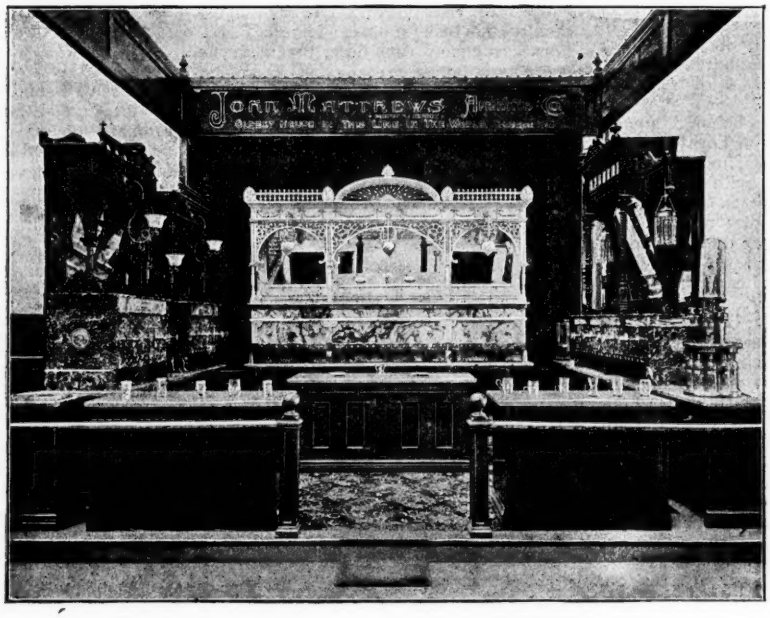


EXHIBIT OF JOHN MATTHEWS APPARATUS CO. SEE PAGE 259.

W. H. Hill & Co., Detroit, Mich.
McClure, Walker & Gibson, Albany, N. Y.
C. S. Dent & Co., Detroit, Mich.
Burroughs, Wellcome & Co., London, Eng.

ASSOCIATE MEMBERS.

Acme White Lead & Color Works, Detroit, Mich.
Detroit White Lead Works, Detroit, Mich.
Henry W. Goodwin, Boston, Mass.
Standford's Vina Vineyard, Vina, Cal., by Byron E. Veatch, Chicago.
Marion Flint Glass Co., Marion, Ind.
S. H. Lutkins, New York City.
W. B. Burke, Philadelphia, Pa.
W. F. Ware, Philadelphia, Pa.
National Capsule Co., Indianapolis, Ind.
Druggists Circular, New York.
Dr. S. Tuttle, Boston, Mass.

On motion of Mr. Kline the new members were elected by an affirmative ballot cast by the secretary.

Intelligence was received at this juncture of the death of John McKesson, Sr., and on motion made by Mr. Van Schaack, the following resolution was adopted by a rising vote:

Whereas, This association has just received the melancholy intelligence of the death of Mr. John McKesson, Sr., of New York, a member of this association for many years, and whose name has been prominently and honorably associated with the wholesale drug business of this country for over half a century.

Resolved, That this association desires to accord their high appreciation of Mr. McKesson's long and honorable career as a merchant, and to express their sincere sympathy with his family and associates in the loss they have sustained.

Resolved, That an official copy of this resolution be forwarded to his family by this association.

After the reception of sundry reports the matter of location of next place of meeting was taken up and a motion to meet in New York City was adopted. In giving his reasons for favoring the selection of New York, President-elect Faxon expressed himself as follows:

All roads lead to New York, Mr. President; next year we will have a large meeting there, and that is what we want. Later on the West is going to get back into its old-fashioned manner of taking rapid strides, and then we want you there. I do certainly believe that it would be better for this association to hold its next meeting in the city of New York. We know something of the hospitality of New York; this association has met there once before.

The installation of officers followed next, and as this concluded the proceedings, the association adjourned subject to the call of the president.

Mr. Hart Replies to Dr. Hammond.

We are in receipt of the following communication from Mr. Ernest Hart, editor of the *British Medical Journal*, referring to the letter of Dr. Hammond, extracts from which were published in the DRUGGIST AND RECORD for September 28.

My respect for and my sympathy with the medical profession in America, and my knowledge of their sentiments, forbid me to regard Dr. William A. Hammond as their representative in the defense which he puts forward in the columns of the *New York Medical Journal*, September 16, of the practices of publicity hunting, by newspaper interviews, newspaper portraits, and of the use of and traffic in secret preparations, etc. I have in the course of recent travel received personally from many hundreds of prominent and representative physicians in Milwaukee, Washington, Boston, Philadelphia, Chicago, Cincinnati, Detroit, and from all parts of the United States, their cordial congratulations on the tone and substance of the addresses which I had the honor to deliver at Milwaukee and Washington. I have been assured on

all hands of the entire sympathy of the great body of the profession in the views therein laid down and discussed. I should have been surprised, however, and perhaps disappointed if they had not elicited some expression of pain and anger from certain quarters. "Let the galled jade wince, the withers" of the great American medical profession are, I am assured, "unwrung." Your correspondent, in an excess of ethical agnosticism, assumes that the enumeration of ethical data as to medical conduct was, or could be, a reproval direct or implied to the medical profession of America. That is an unmerited insult which he addresses to his profession, and indicates a view which I apprehend to be special to himself. Let him enjoy the practices which he defends; I do not think he is likely to find much support, or sympathy in them from medical men in good standing. His account of the position of the medical men in Great Britain is a parody undeserving of serious notice. So, as to myself, whom he favors with some personal abuse, I have been avowedly the scientific adviser to, but it is untrue that I have ever held any of the stock of the Apollinaris Water Co. As to his other trivialities, I was the guest of the Pan-American Medical Congress, and on entering its headquarters I registered in ceremonious form.

I have no desire to be honored among "the Pan-Anglicans," "the Loyal Legion," the "Fat Men of America," and the other objects of lay interest with whom Dr. Hammond puts medical men on a par, and I do not agree with him that medical men should desire to share with them the honor of newspaper notoriety. I do not believe any details of my medical career have ever appeared in any lay paper.

I suggest that it might be desirable for Dr. Hammond to rely less upon his imagination for his facts, and not to assume to speak for a profession from which he has no sort of mandate, and which would, I am well assured, repudiate, if consulted, both his advocacy and his methods of action and of expression.

I am assured that he utterly misrepresents that profession both in his statement of principles which he ascribes to it, and in his abuse of myself. I am, sir,

Yours faithfully,

ERNEST HART.

The Alcohol Duty in France.

M. Poirrier, the well-known chemical manufacturer and senator, has invited the Syndical Chamber of Paris Chemical Manufacturers to make an effort, if not to obtain the suppression of the tax on alcohols used for industrial purposes, at least to prevent its proposed increase. The Chamber has readily taken the matter up, and an address has been sent to the French Minister of Finance showing that, even under existing circumstances, competition with other countries is well-nigh impossible for pharmaceutical preparations, chemicals, etc., in which alcohol is used. The tax is at present 37f. 50c. per hundred liters, and it is proposed to raise it to 50f., or 50c. per liter.

It is very improbable that the tax will be suppressed entirely, and the best French manufacturers can hope for is that the old rate will be maintained.

Senkintan or Thousand Gold Medicine.

One of the most popular nostrums of Japan, and one which has made its proprietor a wealthy man, is Senkintan or "thousand gold medicine," which is made at Tokio by a quack named Nobuyamia, of Osaka, who is a thorough believer in advertising, which he does in a rather unique manner. He has in his employ hundreds of young men each of whom wears a uniform consisting of a handsome coat, an oiled paper cloak, leggins, high clogs and an umbrella bearing the trademark of the manufacturer, two circles interlaced. The supplies of each of these peddlers are carried in a small portmanteau also decorated with the interlaced circles. Each peddler carries with him several dozen packages of the *Senkintan*, or "thousand gold medicine" as its name, literally translated, would read.

The medicine itself is said to contain starch, catechu, thuja (arbor vitæ), liquorice, elecampane, camphor, peppermint, cloves. It is made into little cakes, covered with tinfoil and each cake is divided into 20 portions, each portion being a dose. Minute directions accompany each dose, the medicine being used both externally and internally.

The accompanying illustration shows the label on each package, which may be translated as follows:

Sumi Naga [Maker's Name]	Trade Mark	
Quai [Made at]	Sen [Thousand]	Guwan So [Founder] [Made in Tokio]
Sluin [Factory]	Kin [Gold]	
Do [of returning spring]	Tan [Medicine]	
Saie [Manufactured]		

These peddlers travel on foot all over the Empire of Japan in couples, chanting as they walk the virtues of their medicine as follows: "Ah! Patent thousand gold medicine, the secret of which Nobuyama of Adzuchi street, Osaka, has inherited. Ah! these are the properties of this medicine! Ah! it makes the stomach and the spleen strong! Ah! it is excellent for hoarseness and colds, pyrosis and the result of eating decayed food! Ah! It cures headache, giddiness and dizziness on awakening and is valuable for children's diseases!"

Mexican Vanilla.

The vanilla plant belongs to the orchid family, has a pulpy stem which grows to several yards in length, attaches itself to trees, and appears to be little dependent on the soil for nourishment. The leaves are lanceolate and pulpy, and the yellow flowers bud from the axilla formed by the leaves with the stem. The fruit is a pod from six to twelve inches long, and about half an inch in diameter at its thickest part, tapering down toward the stem, curved in its entire length, dark green in its earlier stages, and yellow when fully ripe. It is filled with minute black seeds, somewhat resembling iron fillings. When prepared for market, the pod becomes reduced to about a quarter of its original thickness, is black in color, and, it is needless to say, emits a very agreeable perfume. Six varieties of vanilla are known in Mexico, says an exchange, namely, the *mansa*, the *cimarrona*, the *mestiza*, the *pompona*, the *puerco* and the *mono*.

There is yet another vanilla, called the *tarro* or bamboo vanilla, which is considered by many as a distinct species, but is really nothing else than the *manso* grown in the *tarrales* or bamboo thickets in the depths of the virgin forests, where it does not receive a sufficiency of sun and air, and produces a pod thinner and longer than the ordinary mansa. The vanilla buyers formerly divided the prepared bean into four classes, namely:

1.—The beans or pods from six and a half inches long and upward, short in the neck or stalk, sound and black; the beans which become split or open, provided they have the foregoing qualities, and the split does not extend more than a third of the pod. This class was again subdivided into *terciada*, which is composed of the shortest pods; *primera chica*, which contains the next in size; *primera grande*, the next; *marca menor*, the next; and *marca mayor*, the largest of all.

2.—Those pods which differ from the *terciada* only in being shorter, two of them counting as one of the first class.

3.—*Zacate*, or the pods of all sizes which are imperfect through being gathered before becoming properly ripe, or being over-cured; *pescozuda*, *vana*, *cueruda* and *aposcoyonada*, all names for pods in a more or less damaged condition; and *cimarrona* or wild vanilla in good or fair condition, three pods counting as one of the first class.

4.—The *rezacate*, composed of the very short pods; of those split clear up to the stalk; of the badly managed; of the very immature; and of the very much overcured, which resembles a piece of wood. fO this fourth class, six pods counted as one of the first class. The quantity of this and of the second class was always very limited. At the present day, the only distinction made is between the best class and the *cimarrona* and *rezacate*, the two last being sold at a very much lower price than the former. Both buying and selling are carried on by count.—*American Grocer*.

Joseph F. Geisler, Ph.C., an alumnus of the University of Michigan who has gained a reputation in recent years as an analytical chemist, and is now chemist to the New York Mercantile Exchange and other public bureaus in this city, was married on Wednesday, October 18, to Miss Ida Mueller, of New York City.

With the Advertisers.

A Perfectly Digested Peptone.

Studious, well directed, careful investigation by brilliant minds spreading over a long term of years and confined to a single subject may be reckoned as certain of producing valuable results. This is the method pursued by Fairchild Bros. & Foster in perfecting their digestive products. Commencing with pepsin they have gradually included preparations of all the animal digestive ferments among the products of their laboratory, and the latest product of that laboratory is panopepton, as the name implies, is a perfectly digested peptone, and unlike other predigested foods it is palatable. Write Fairchild Bros. & Foster, 82 Fulton street, New York City, for literature concerning its mentioning the DRUGGIST AND RECORD.

Druggists Sundries Specialties.

Artificial limbs, trusses, elastic stockings, crutches, rubber goods and surgical instruments are now kept and displayed by a large number of druggists throughout the country, and many firms making these articles appeal especially to the drug trade as a medium of distribution to the public. Among the prominent manufacturers of these articles whose advertisement will be found in the pages of this journal is George R. Fuller, Rochester, N. Y. Mr. Fuller will be glad to supply a catalogue containing particulars of the goods of his manufacture to any druggist making the request and mentioning this paper.

Elegant Pharmacy.

The name of Wyeth is intimately associated with the triumphs of American "elegant pharmacy," an elegance that controverts all the antiquated notions that therapeutic value increases in proportion with disagreeableness. Write Wyeth & Bro., Philadelphia, for their new catalogue, which excellent exponent of elegant pharmacy will be sent free if the DRUGGIST AND RECORD is mentioned when writing.

Burnham's Clam Bouillon.

The season is approaching when hot drinks will again find place at the soda fountain. Among the more popular of these beverages by reason of its nutritive and stimulating qualities is Burnham's clam bouillon. There are other reasons why this preparation should find favor with both druggists and the public. Unlike many of the preserved substances of its kind Burnham's clam bouillon is not put up in cans of tin or other metal but is sent out in clear glass bottles, which affords perhaps the very best method of exhibiting goods of this kind. Burnham's clam bouillon can be ordered either direct from the E. S. Burnham Company, 120 Gansevoort street, New York, or through any jobbing druggist.

Pharmacists and the Sale of Vaccine Lymph.

Pharmacists who are naturally looked to by physicians for the supply of pure vaccine virus would do well, in the present period of activity against the infection of smallpox, to take steps toward securing an agency for the sale of a reliable animal vaccine lymph. This can be done by writing to the New England Vaccine Co., of Chelsea Station, Boston, Mass., whose advertisement will be found on the cover page of this issue.

An Improvement in Syringes.

The "Big Four" syringe made by Walter F. Ware, 70 North Third street, Philadelphia, has some points about it which are worthy of especial attention. These are:

1st. The stopper will fit any ordinary prescription vial, from two to six ounces, and can be carried in the bottle; handy to use at a moment's notice and obviate the necessity of carrying three articles, *viz.*, bottle, syringe and vessel, to pour the liquid in to fill the syringe from.

2d. The stopper slides on the barrel and may be placed at any position to fit a long or short bottle.

3d. There is a soft rubber, cone-shaped tip that cannot strike the sore part or injure in any way, and being soft rubber, can do no injury if it should touch the sore part.

4th. There is a soft rubber packing that takes up but little space in the syringe, and being soft and flexible fits itself to any irregularities of the barrel, and is positively tight and works perfectly at all times.

5th. The handle is made of French jet and is stronger than glass, and will not break when carried in the pocket.

In addition these syringes are sold at such a moderate price that every enterprising dispenser will see the great advantage of sending one out with every injection dispensed.

When writing Mr. Ware for quotations don't fail to mention this journal.

Glass Labeled Bottles Free.

With the first order for 25 pint bottles of their fluid extracts Smith, Kline & French Co. will give free 25 glass labeled stock bottles. They do this because they are convinced that when once the dispenser learns by actual personal observation the excellence of their make thereafter he will buy only Smith, Kline & French Co.'s make. This is a very liberal offer, and in taking advantage of it our readers should mention the DRUGGIST AND RECORD

Effective Advertising.

Very many of our readers will have doubtless observed the striking advertisement which makers of the Arnold Steam and Rochester sterilizers display in the different issues of this journal. "It's a little sister at the White House," it begins, and suggests the need of "Another Sterilizer." They make two—the "Arnold," which is referred to as the "Best in the World," the point made for the latter being the fact that it is a cheaper apparatus. Wilmot Castle & Co., Rochester, N. Y., who are the makers of these instruments, are offering special inducements to druggists and invite correspondence on the subject.

Unanswerable Demonstration.

We have received and read a publication recently issued by the Humphreys' Medicine Co., New York. It contains nearly a thousand testimonials of the efficacy of Humphreys' Specifics.

These testimonials are the unsolicited offerings of those who have experienced and witnessed the wonderful curative effects of these specifics. There are some three hundred from publishers and editors, one hundred from dealers, and others, from every grade of society, and all with one accord tell thesame story, the wonderful curative effects of Humphreys' Specifics.

Surely one thing is settled by these testimonials, Humphreys' Specifics do cure. So say the papers. Send to the company for a free copy of "What Dealers Say," mentioning the DRUGGIST AND RECORD.

Troemner's Scales.

The World's Fair commissioners have just notified Henry Troemner, of Philadelphia, that he was awarded the prize medal for his highly perfected counter scales.

Encapsuled Medicines.

The modern method of administering disagreeable tasting medicines by means of inclosing the drug in capsules of soft and hard gelatin received perhaps its greatest impetus from the efforts made by Dundas Dick, of New York, to bring a knowledge of its advantages prominently before the notice of physicians. The firm which he established in this city under the name Dundas Dick & Co. have long enjoyed an enviable reputation for uniformity and reliability of product, and their goods are now to be found on sale in all parts of the country. The empty and filled capsules of Dundas Dick & Co. can be procured of any firm of wholesale druggists, or direct from the makers, Dundas Dick & Co., Centre and White streets, New York City. Circulars and price lists giving particulars of the different specialties of the firm can be obtained by any druggist on application at the above address.

Still Ahead.

The following extract from the Judge's Report of the Columbian Exposition is self explanatory:

"Seabury & Johnson's exhibit of medicinal and surgical plasters, antiseptic dressings, etc., has been examined. We find it worthy of an award for the following reasons:

1st "Superior quality of india rubber porous and plain spread medicinal and surgical plasters, a high standard of perfect medication being preserved, a guaranteed percentage of the assayed drug indicated being uniformly present."

2d. "Antiseptic dressings for surgical use, in which an indicated percentage of medication is uniformly present. Such dressings are packed in aseptic containers."

3d. "Reliability, [uniformity] of, [quality, [and general excellence."

A Cure that Cures.

The cure that cures is the cure that sells, because it recommends itself not only to those who have themselves tried it but also to their friends. Raymond & Co., Brooklyn, sell their plasters on this basis. They know that the plasters are efficacious, and offer to send six free to dealers who comply with certain easy conditions. Write them for details.

Tooth Powder Bottles.

The attention of druggists is invited to the advertisement of John M. Maris & Co., of Philadelphia and New York, which appears in the colored pages of this issue. The tooth powder bottles (styled No. 602) there described have many important advantages over the ordinary container now in use. The chief feature of novelty and merit in the new bottle is found in its construction, which differs entirely from any bottle for similar purposes. The bottom is so constructed as to be entirely open, being fitted with a screw cap of nickel-plated metal. This cap is made with a spring bottom, so that with a touch of the finger or thumb, the powder is readily ejected from the small opening at the top, when required for use. This is an important point since it avoids unnecessary waste of powder so unavoidable with the ordinary styles of powder bottles now in use. Write for prices, mentioning the DRUGGIST AND RECORD.

The Hot Soda Season.

One of the handsomest and most artistic catalogues of hot soda apparatus yet gotten up has just been gotten out by A. D. Puffer & Sons, of Boston, in the shape of an elegant illustrated 16-page circular. All interested in hot soda should see a copy of this circular which will be forwarded free by A. D. Puffer & Sons to any one who mentions this journal in writing.

Perfumes.

In quality, style and price, the line of perfumery and toilet articles advertised by Tarrant & Co., in this issue, compare favorably with the best products of the first perfumers of Europe. Dealers who handle these goods, make a satisfactory profit, are always pleased with the neat and attractive appearance of packages and find the articles "ready sellers." As a holiday line they are the best value on the market. Send for price list and terms, addressing Tarrant & Co., Murray and Greenwich streets, New York, mentioning his paper.

Kefaline-Billroth.

Kefaline-Billroth is claimed to be the most effective analgesic, antipyretic anodyne, anti-congestive or anti-inflammatory preparation yet introduced to the drug trade.

Its sales, according to the proprietors, have been enormous in Paris and in certain parts of our own country. It is unexcelled by even the best of the coal tar derivatives, because, as it is claimed, it is safer, cheaper, and more effective. It is guaranteed to produce all the good effects of the coal tar derivatives and has not one of the possibly bad effects.

It may be well worth the while of every druggist to write the Kefaline Co., Boston, Mass., U. S. A., agents, for further particulars and prices in quantity, particularly such druggists as wish to put up their own headache, neuralgic, rheumatic and such like cures.

Emerson's Bromo-Seltzer.

The Emerson Drug Co., of Baltimore, Md., are extensively advertising their Bromo-Seltzer in all parts of the country and the demand has already become of satisfactory proportions. The Bromo-Seltzer package is very neat in appearance

and being wonderfully cheap sells without effort. We append herewith a cut showing the general style of package. Druggists will find it to their advantage to write to the Emerson Drug Co. for prices on quantity lots, as the goods can be purchased to greater profit than if prepared by druggists themselves.

A New Syrup Jar.

The John Matthews Apparatus Co. call attention in our advertising columns to their "Climax" syrup jar, which is claimed to be the only perfect glass syrup jar in the market. The point is made that leakage or breakage does not occur with the "Climax" and its ease in handling is also especially commented upon. The new catalogue of the firm for 1894 is referred to as in press, and copies will be mailed free to any address on request.

Drug Window Displays.

In the advertising pages of this issue C. H. Bangs, who is widely and favorably known as a maker of drug store fixtures, calls attention to the method of trimming windows adopted by bright business-like druggists. He makes the point that the druggist who wishes his store decoratively furnished should employ the services of an experienced architect, one who has made the subject of drug store fittings a special study. The inference to be drawn is that it will be to the advantage of all druggists to consult C. H. Bangs in the refitting of a drug store. Letters can be addressed to C. H. Bangs at any of the following addresses: New York, 35 Murray street; Boston, 342 Washington street; Philadelphia, 1416 Chestnut street, and Cleveland, 176 Public square.

The Pan-American Congress visit Frederick Stearns & Co.

The delegates to the Pan-American Medical Congress who visited Detroit recently paid a visit of inspection to a number of the pharmaceutical laboratories for which the city is famed. The extensive laboratory of Frederick Stearns & Co., on Twenty-first St. was visited first. The physicians were conducted through the buildings by the president of the company, Frederick K. Stearns; C. McLaughlin, vice-president of the company; T. Bennett, secretary; W. D. Stearns, superintendent; L. H. Gardner, assistant superintendent; M. Gatell; Spanish correspondent, N. A. Tabor, D. M. Gray, and C. C. Sherrard, each one taking a number of the gentlemen in charge.

They visited twenty-four departments including the fluid extract manufacturing room, pomade washers, pharmaceutical manufacturing, capsule room, pill manufacturing room and gelatin coating room, sugar coating room, pill mass cutting room, press room, composing room, and stock room. On the top of each of the doors to the different departments was a large printed card in Spanish describing the department, and the nature of the work performed there. They were provided by a forethought of Mr. Stearns, and as a courtesy to the visitors.

The visitors were much impressed with the completeness of the lines of pharmaceutical products, with the magnitude of the entire establishment, its admirable equipment, the thorough system that was apparent everywhere, and the scrupulous cleanliness of every department. Each of the visitors was presented with two small boxes as mementoes, one containing a bottle of Stearns' rose perfume, and the other samples of pharmaceutical preparations.

They also visited the laboratories of Parke, Davis & Co. and Nelson, Baker & Co., where they were also courteously received and hospitably entertained.

"Meagher's Orange Quinine Wine," prepared by Meagher Bros. & Co., Montreal, is being advertised extensively as "an official preparation." This will no doubt influence many physicians to prescribe the particular brand advertised, but it is somewhat of a liberty to take with the pharmacopœia, the more so as wine of quinine finds no place in its pages.